



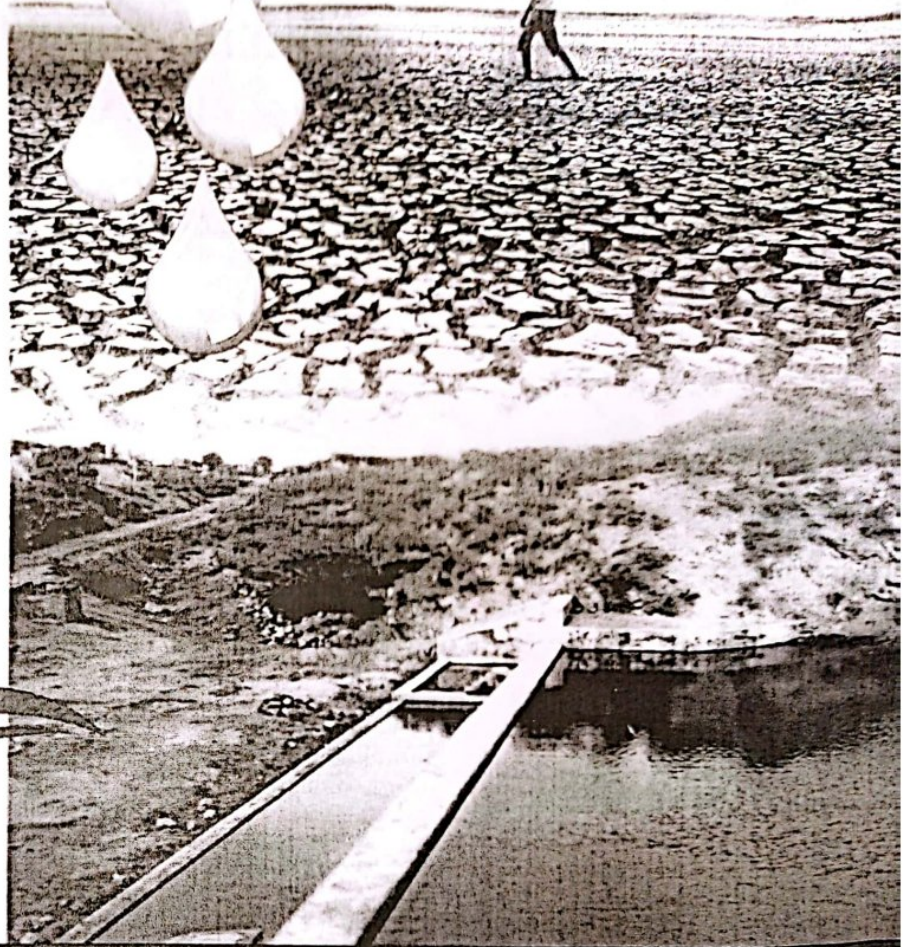
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# ASSESSMENT OF ECONOMIC DEVELOPMENT OF MODEL WATERSHED VILLAGE – A CASE STUDY OF HIVREBAZAR IN NAGAR TAHESIL

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## Abstract

Water is basic natural resource on the earth for all living organisms including mankind and for development and survival of plant community. People generally say “no water no life”. Water is necessary for every-day life. Availability of water motivates development and absence of water leads to destruction. However, during last century man has exploited this resource very fast through various activities which had led to quantitative and qualitative deterioration of water resource (Guljar R.K.et.al. 2008). As a result, the world has become a hot spot of water crisis.

This quantity of water resource is very high on the earth but only small quantity is useful for mankind. As global population is increasing rapidly, water for food production is becoming an increasing scare resource, and the situation is further aggravated by climate change (Molden D., 2007). The changes made by human community demanding water and the uneven distributions of water in nature have made the problem of water resource worst. In the world many more rain fed areas are the hotspot of food insecurity, soil degradation, water scarcity, poverty, out migration, malnutrition and poor social economical development.

**Keyword-** organism, destruction, and deterioration aggravated, malnutrition.

## Introduction

Grampanchayat Hivrebazsar is located in Ahmednagar district of Maharashtra. Before 1989, Hivrebazsar was a village known for all the wrong things. It was known with problems, crime was high. Infighting frequently and murder were too. Illicit liquor was plenty and most people migrated from the village in search of better earning opportunities. A village famous for the wrestlers has turned to be village gangsters. All the activities in the village were famous around liquor dens.

Educational attainment was very less, whosoever wishes to study high was require for 16 Km. The women literacy is too less (5%). The income of the villagers was very less. Near about 95% peoples had to go nearby villages in search of work to earn their daily bread. Health care scenario too was at its worst. All the problems were silently giving rise to the crime rate.

The Beginning of the Success Story in the 1980s, the youth of Hivarebazar began to think about remedying the detectable scenario confronting them. The elections to local Panchayats in 1989 provided the right occasion. In search of a candidate who would be acceptable to all factions, the village youth zeroed in on Pawar, who won unopposed. From here began the village's trust with destiny. Inspired by social activist Anna Hazare, Pawar took up water conservation works year after year. Anna Hazare is a Gandhian who scripted the success story for his village Ralegaon Siddi, 40 km from Hivarebazar, in much the same way as Hivarebazar. He too inspired his people to come together and treat the land so as to harness rainwater and put social rules in place to manage the natural resources. His model of development using water as the core and the consequent success of Ralegaon Sddi has been an inspiration, not only to Hivarebazar but also to a large number of other villages across the country. Even government programmes have been inspired by the success to reemphasize watershed development as a way of holistic natural resource management. The district was brought under the Joint Forest Management (JFM) Programme in 1992. The JFM programme itself was born in 1988 after a law was passed by the central government to include communities in the conservation of forest resources, mainly village forests. By the year 1993, the district's Social Forestry Department reached Hiwarebazar and brought Pawar on board to regenerate the completely degraded 70 ha of village forest and the catchments of the village wells. With local labour donations, the Panchayat built 40,000 contour trenches around the hills to conserve rainwater and recharge groundwater. Residents took up massive plantation and forest regeneration activities. Immediately after the monsoon, many wells in the village collected enough water to increase the irrigation area from 20 ha to 70 ha in 1993. "The village was just beginning to get a bit of life back in its veins," remembers Pawar. Hiwarebazar's achievement under the JFM programme is special as it counts among the few successful JFM cases in India. JFM as a programme failed to capture the imagination of the people mainly due to unclear property rights and weak institutional capacities. For any programme to be successful therefore one needs a clear property rights regime, whether defining communal or individual rights, strong institutional support as well as a strong and visionary leadership. In 1994, the residents, along with the Gram Sabha (village council),

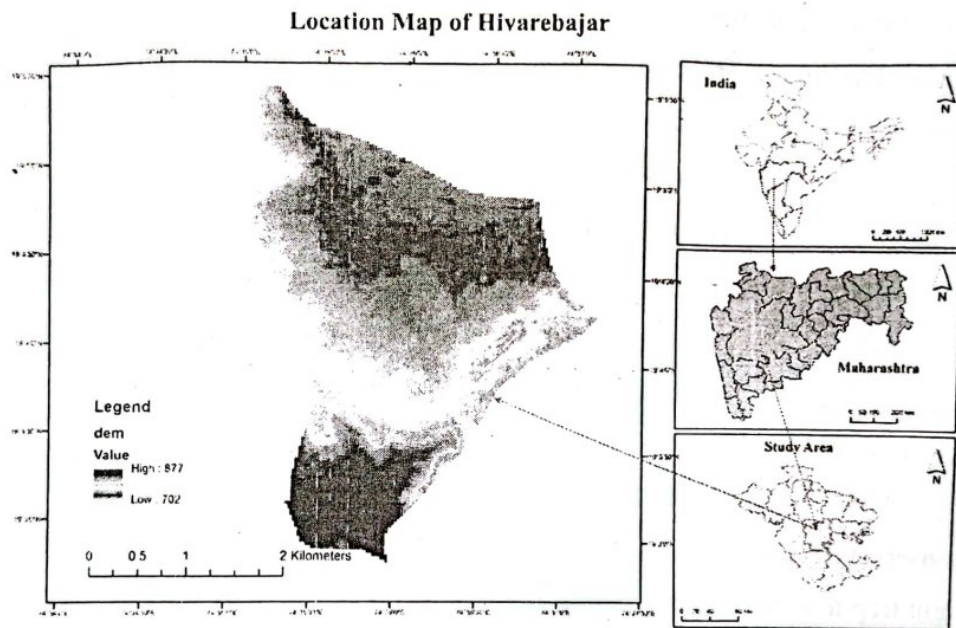
approached 12 different agencies to implement watershed works under the state's EGS. The village prepared its own five year plan for 1995-2000 that emphasized local ecological regeneration. Implementation of the five year plan then became the objective of the EGS, which was otherwise a wage employment programme. This was to ensure that all departments implementing projects in the village would have a common and integrated work plan. Work began in 1995 building contour trenches across the village hillocks and planting trees to arrest runoff. Simultaneously, in 1994 the Maharashtra government brought Hivare Bazar under the Adarsh Gaon Yojana (AGY), a scheme to replicate the success story of Ralegan Siddhi. The AGY programme was based on five principles: a ban on cutting trees, free grazing, and liquor; family planning; and contributing village labour for development works. The first work it took up was to plant trees on forestland and people were persuaded to stop grazing in these lands. Grazing forms the second most important part of rural-pastoral life with every household owning cattle. Traditionally, common land in the village also doubles as grazing ground. For watershed development to be effective this activity had to be stopped to allow the pasture to regenerate. In Hivarebazar, prior to the implementation of the AGY rules, many people owned more goats than cows. Goats eat plants by pulling them out causing the soil to loosen and leave less scope for the plants/grasses to grow back. Keeping this in mind, the village slowly sold off all its goats in favor of cows.

The village invested all its development money of the five-year plan on water conservation recharging groundwater as well as creating surface storage systems. It laid a tight trap to catch rainwater. The 70 ha of forest helped in treating the catchments for most of the wells, 414 ha of contour bunding stopped run-off and saved farms from silting, and around 660 water harvesting structures of various types captured rainwater. A total of Rs 42 Lakhs was spent through the State government on EGS in the village. Treating 1000 ha of land, the per ha cost of treatment of land was Rs 4000. But the cost benefits in term of raised incomes of village residents were phenomenal (Supriya Singh, 2007).

### **Study Area**

Gram Panchayat Hivarebazar is in Nagar 'tahsil' of Ahmednagar district in western Maharashtra, and is situated at a distance of 28 kms from Ahmednagar city, the district headquarters. The latitudinal extent of Hivare Bazar is  $19^{\circ} 02' 18''$  to  $19^{\circ} 05' 21''$  North and longitude extent is  $74^{\circ} 34' 36''$  to  $74^{\circ} 36' 58''$  East. Hivare Bazar is situated in a low rainfall drought-prone area of Maharashtra State – 'quoted average rainfall' of about 579 mm, with high variability. Its physiographic setting is the hilly part of the Deccan Traps country at the

face of an escarpment and head of a local watershed with elevation mainly in the range 710-740 m ASL. The main occupation in the village is agriculture, though in recent times, many people have taken up a job in the military or teach in schools in order to ensure at least one steady source of income in each family. The main food crops are bajra (millet) and jowar (sorghum), while the main cash crop is onions. Also cultivated are pulses and groundnuts, vegetables such as cucumber, coriander and spinach, and occasionally, fruits. Of the total geographical area of the village of 976.84 hectares, 795.23 hectares is cultivable. The principal form of irrigation in the village is well irrigation (open wells). The population of Hivare Bazar in 2011 was 1,233 among it 636 males and 597 females.



### Aims and Objectives

1. To assess the economic import-whether the watershed Development Programme had caused any change in the economic condition of the community at large.

### Data Source

Materials of the present study are collected through numerous sources.

### Primary Data

Primary data is collected from the sample beneficiaries through personal interviews. For this purpose, questionnaire was prepared. For collection of data field work was done.

## Secondary Data

The secondary data information is collected from record of Grampanchayat, Taluka Krushi Offices, Panchayat Samitti and Self Help Groups (SHG). Some data is collected from several published research papers and Ph.D. Theses. For collection of data, topic related books and journals are referred. For the data related to various physical, socio-economic and demographic characteristics District Census Handbooks is referred (1981-2011). Toposheets are also used as a secondary data for study purpose. In addition the researcher discussed with state government departments like Soil Conservation offices, District Groundwater Department and officials of different NGOs, Social workers and Sarpanchs of villages.

## Result and Discussion

1. Rate of literacy always increased as increased census year due to awareness of education through Gramsabha and socio-economic development of the village. Though the growth rate of female literacy shows increasing trend, it is less than the growth rate of male literacy. So the growth rate of female literacy should be increased to avoid future socio-economic problems.
2. The average proportion of working population is increased in Hivarebajar. In general it is observed that there is an increasing trend of working population from 53.65% (1991) to 69.22% (2011) due to watershed development and their allied developmental activities.
3. From the study of household social conditions data it is clear that joint family (69%) system is dominant in study area. In general it is found that the in model watershed village Hivare Bazar highest proportion of population consist of general category and only.
4. Hivare Bazar village average percentage of Kesari ration card householders are higher (63.6) as compare to yellow (21.2) and white (15.2) ration cards. It indicates highest percentage of households has medium income and still near about  $\frac{1}{4}$  households are in below poverty line and less percentage households has very high annual income. Generally it is found that improvement in income level of the villagers after watershed development.
5. Dealing with type of houses, it is the favor of watershed development. Before watershed development 74.2 percent households have kaccha type of houses, but after watershed developments the value are showing positive result with the highest concentration towards pacca houses i.e.90.9 percent.

6. The Standard of Living Index (SLI) shows available facilities of the household in-between before and after watershed development. The SLI consists of three categories i.e. low, medium and high. It has favored of watershed development, by showing increases percentage of high SLI of average 6 percentages, medium SLI by 1.6 percent after watershed development. And decreased average percentage of low SLI 4.6 percentage. Generally in Hivare Bazar shows improvement in low SLI to medium and high.
7. Use of renewable energy resources is less in model watershed village Hivare Bazar. Use of bio gas is rapidly increased after watershed development up to 62.9. Still use of solar and wind energy is very less in Hivare Bazar. On an average the use of traditional cooking fuel has decreased rapidly in village. After watershed development it is favored to LPG.
8. The Kitchen is described in three categories, separate room, inside room and open space, the statistics displays that before this program proportion of open Space was higher village followed by inside room; however after this Watershed Development this share moved towards the separate kitchen. The toilet facility shared of own, public and open field toilet, also improved due to the Watershed Development, as the absorption of people from open field progressed towards the own toilet.
9. The proportion of average percentage of inherited ownership of land from parents (84.3) is very high and from purchased (15.7) and government (00) is very less. These figures indicate that villagers are able to maintain their standard of living from their own occupation. It is positive sign of development in the village Hivare Bazar. The land possessed is also mentioned, where the Hivare Bazar. In general average percentage of 0 to 5 acre households land holders are high and followed by above 8 acres and in between 5 to 8 acre. It's beneficial to sustain water resource of the village.
10. Hivare Bazar has high percentage of land under irrigation, followed by non-irrigation, forest cover, barren and land under gavyan. Land under forest cover is less in model watershed village. Agriculture land 59.4 percent land is irrigated and only 4.7 percent land is non-irrigated. Due to perennial source of water for irrigation the standard of living and economic condition of peoples are increased.
11. The average percentage of rain water irrigation before watershed development in the model watershed village was 52 percent, but after watershed development it decreased up to 7.6 percentages because of availability of other sources of water for irrigation and implementation of watershed development programmes. In general it is found that after

watershed development the main source of water for irrigation is wells. The average percentage of bore well irrigation is very less due to ban on bore wells in the all model watershed villages.

12. In general before watershed development availability of water to the agriculture land is average 05 months and after successfully implementation of watershed development programmess it increased up to average 05 months and rises up to 10 months Hivare Bazar.
13. The trend of agriculture cultivation methods is shifting from bullock to tractor after watershed development. It is found that after watershed development the use of pesticides and fertilizers is almost doubled in model watershed village Hivare Bazar.
14. Before watershed development in village produced average 2 crops in a year i.e. Kharip and Rabbi One crop in each, but after successful implementation of watershed programmes it increased by two Hivare Bazar.
15. The pattern of agriculture productivity of model village Hivare Bazar has been delineated with the help of Kendall's method. Though watershed development takes places in village Hivare Bazar but in agriculture productivity not shows any change in before and after watershed development. During both period of time Hivrebajar comes under medium agriculture productivity index because in the surveyed year this village receiving very low annual average rainfall as well as production of fodder crops is increases as compare to remaining crops.
16. In general among these model watershed namely Hivrebajar has higher average percentage of migration. It is not so because of development but due to physical location of village. Case of purpose of migration for services is highest, followed by business, education, labour and least migration in laborious purpose is found. This statics shows development of educational attainment, increasing standard of living, social awareness etc. of the model watershed village Hivare Bazar. Due to increasing income from agriculture and their allied activity. Hivare Bazar shows duration of migration less than four month is higher than all season's migration and highest percentage of migrant have monthly income more than 15000/- Rs.

**Conclusion :-** As wealth increases in Hivarebazar, the visitor to Hivarebazar can observe changes in the lifestyles of the inhabitants. Present research shows due to watershed development and their component economic change took place in village Hivrebazar in different point of view.



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