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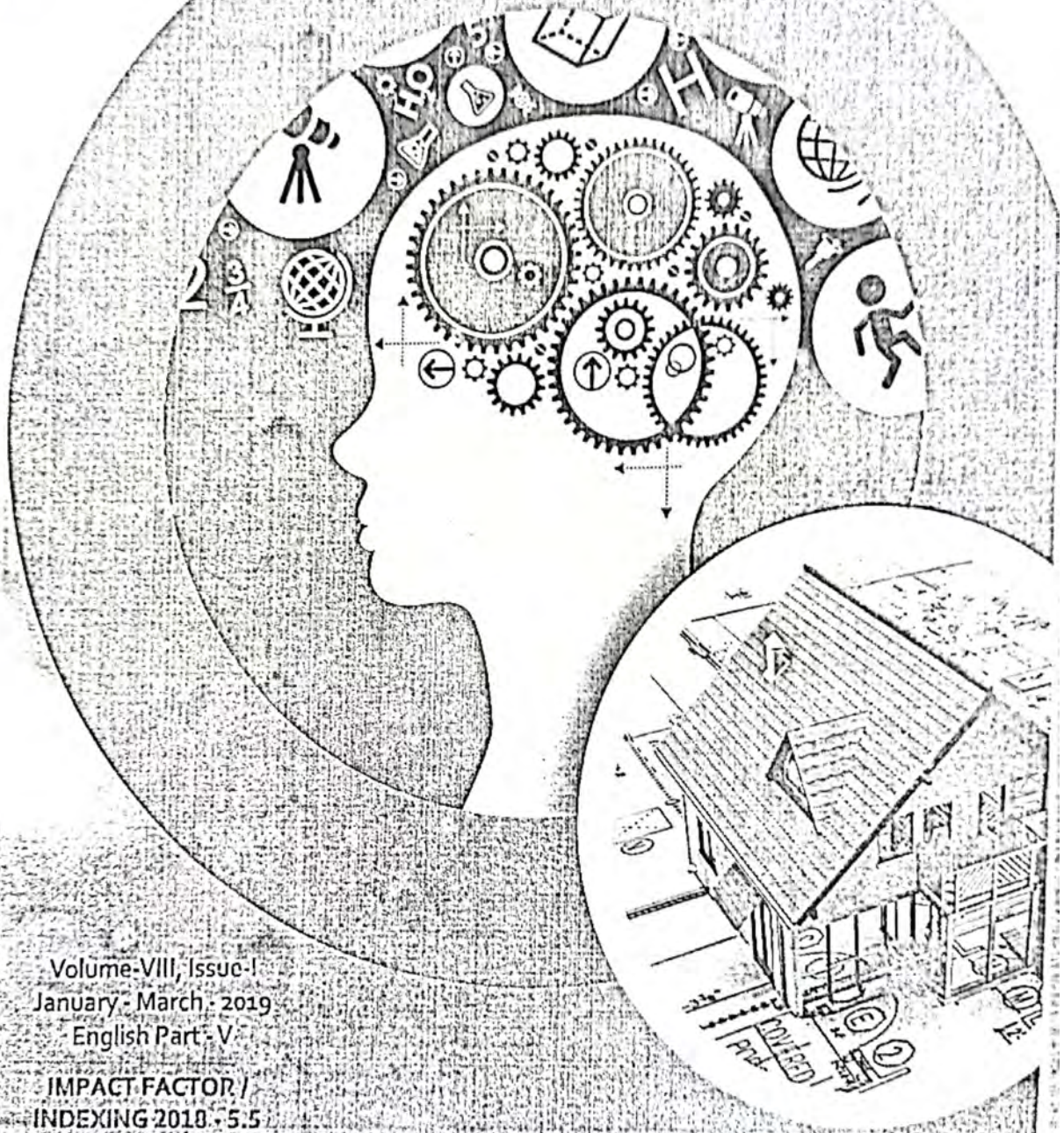

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6. Study of Sustainable Productivity of Historical Irrigation Phad System in Sakri Tehsil

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Introduction

After India got independence, there was a wide variety of challenges facing the state government regarding agricultural policy. Due to the increase in food production problems for the increased population, even after independence, the drought that took place within a few years of the revolt was added. On this backdrop, efforts have been made to increase the production of organic produce by encouraging the construction of the dam in rural areas by expanding the facilities of irrigation, by expanding the facilities of irrigation, by expanding the facilities of irrigation, by expanding the farming education, and by expanding the program to improve farming in the villages. But these plans were going to be very late for success and the challenges were difficult. The government's expectations were growing faster than the government. Despite the country's policy of of universal politics, despite the country being unable to produce enough food during the famine, a strong nation like the United State had to take a pan of begging to help the grain help on their terms. It was insulting to the newly awakened Indian intentions after independence. As a solution to this, the Central Government adopted a strategy to adopt the technology of Green Revolution to make the nation self-sufficient in food production in the mid-sixties of the last century and its compatibility was seen in the field of agriculture. The country became self-sufficient in the case of food grains in a few years. Green revolution took place in the country, the Green Revolution started from the grains of first Wheat and then Rice.

In the historical Phad system of Dhule district, Wheat and Rice are already being grown. In the beautiful scented rice crop of Sakri tehsil, the crop was grown in each of the villages of Panzra-kan basin till 1990's. many foreign tourists have mentioned tourism in the travel detail as paddy cultivation near pimpalner village. After the Green Revolution, organic fertilizers and

organic seeds were used. In time, this farming was threatened by human reason. After 1990 production of rice in this Phad system farm has stopped.

Study Area

Sakri Tehsil is a located in Dhule district of Maharashtra. The total area of sakri is 2,409.86 sq. km. The study region lies between north latitude 20°50'15" to 21°15'22" N and east longitude 73°56'24" to 74°30'18" E. According to census of 2011 there is 464913 populations live in Sakri tehsil 235997 male and 228916 are females. The Population density of Sakri tehsil is 193per sq.km. Out of total population 93.66 % People live in rural area and 6.34% People in urban area in Sakri Tehsil.

Objectives

1) To find out impact of the social structure on Phad agriculture.
2) To find out the reasons for sustainable farming of Phad agriculture.
3) To study people's opinion in the Historical Phad irrigation system..
4) To study of the financial consequences of the phad farming of farmers. .

Hypothesis

Natural factors, government policies and people's changing ideology are affecting sustainable Phad agriculture.

Material and Method

For this study the Primary data is generated through field work by a Questionnaire, which has been carried out in different Phad villages in the Panzara river basin. The secondary data of land use is collected from the statistical review of the Village report Phad Panch committees, district census, agriculture, Irrigation, tehsil offices for the year 2016-17. All statistical data is taken from the above information and with the help of table is use for the analysis social impact of the study region.

Result and Discussion

There is a close relationship between agriculture and water. Crop damage due to inadequate and irregular rainfall in Maharashtra. So many times drought conditions have been fought, initially, there was a need for artificial water supply to save the crop, since ancient times, efforts have been made to supply water to the farmer through well and Phad canals, which were earlier in irrigation projects in Maharashtra. Dhule district is one of the famous Phad methods in the state. This method of farming has not affected the drought in Maharashtra in the Panzara

basin. According to water expert shri. Madhavrao Chitale, in the monsoon season, the annual rainfall of Dhule district is more than that to 20 to 25 days. Therefore, due to the world –famous Phad system of dhule district, the yield of the crops gets benefited by the flow of the fields and the production of crop is sustainable. Because crop are small, they survive in less rain, but there is a dire need for water during maturation and they are easily filled in Sakri tehsil. Rainfall of Panzara rivers is relatively high every year, and in August-Sept., the water level in Latipada and Jamkheli dams is high, so that the people of the village from the village are able to co-operate with each other so that the river becomes alive.

Sakri Tehsil Useable Phad Distribution

Sr,no	Village Phad Name	Area in Hector	Sr,no	Village Phad Name	Area in Hector
1	Samode	135	6	Gondas	60
2	Shenpur	45	7	Nagpur	45
3	Kasare	96	8	Shewali	35
4	Malpur	98	9	Datarti	35
5	Kokale	61	--	---	----

Source – Computed by Researcher

Phad System Defination

According to Garden- "Irrigation by constructing small weirs and obstructing water by canal on river is called as Phad system".

Phad System Impact in Society

This traditional farming system in the basin of Panzara-kan region is known as the best example of community building. Because of those who have farm land in this phad system were going for the repair of the phad canal, the society was not able to own the farm and they were given indirect benefit through this method. For example , people working in the village carpenter used to carry five wooden utensils used for repairing the wood, whereas the Barber family members of the village were responsible for bringing food coaches to the people who cleaning their canal, the blacksmith family were responsible for repairing iron agriculture instrument , the economic activity of the Brahman family members in this field yes to give attention to the work, Bhil community's man are working watchman, waterman, any other works and the world famous phad system work as totally people cooperative and people involved. In this farming process, harvesting worker and other cultivator were given compensation when their work was reimbursed in the form of grains.

Sustainable Phad Agriculture Reason

There are many reasons for this to be traditional Phad agriculture. This system has been divided into three to four parts and each year the crop pattern is taken into consideration while taking Kharif and Rabbi crop from this region. It is through that all the farmers of the village are together and deciding the sequence of crops that the quality of the land will be maintained. Similarly, after the Kharif and Rabbi crop, the area is given for the purpose to feed cattle in the Phads area Specially Shepherding community and their wages are set for nigh their field. Because of this process, the supply of organic fertilizer in the soil is regular and therefore there is no need to use chemical fertilizer, hence the scientific methods of farming still survive.

Crop Patteren in Malpur Phad

Crop Season	Yedbai Phad	Dasad Phad	Mavali Phad	Khumbhari Phad
Kharif	Bajara	Bajara	Maize	Maize
Rabbi	Wheat	Wheat	Gram	Gram

Source-Malpur Phad Committee Report

Organizational Set Up in Phad System

IRRIGATORS

CHAIRMAN

PANCH COMMITTEE

CANAL OFFICER (Revenu Officer)

Supervisor (Hawaldar)	Watchman (Jaglya)	Waterman (Patkari)

The Phad system of irrigation is entirely management by the community . it has its own controlling organization. All the important function like choice of Weair repairing, Canal repairing, crops water distribution, maintenance, etc, are operated by the committee consisting of beneficiaries, (WAIMI-1987) .

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