Original Research Paper Geography

Impact of Parachh Dam on the Village Parachh, Sahibzada Ajit Singh Nagar District, Punjab

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ABSTRACT

In the present study an attempt has been made to analyse the impact of dam on irrigation, crop productivity and milk production of the village Parachh.

The study is based on both secondary as well as primary sources of data. The major secondary sources used are the official publications of the Survey of India, Department of Irrigation and Department of Revenue.

Primary data has been collected personally by the authors during field survey covering different aspects of irrigation, cropping pattern and production of milk of the village.

KEYWORDS : Dam, Irrigation, Production

Introduction

Dams are used to produce electricity and are source of water for irrigation and domestic purposes. A check dam is a small, temporary or permanent, construction across a swale, drainage ditch, or waterway to counteract erosion by reducing water flow velocity.

Dams provide a range of economic, environmental, and social benefits, including recreation, flood control, water supply, hydroelectric power, river navigation, and wildlife habitat. So keeping in mind the above facts about check dams, a need was felt to study the impacts of the same on the village environment and life.

Objectives

The main objective of the present study is to study the change in terms of irrigated area, crop productivity and milk production after the construction of dam.

Data Sources and Methodology

The study is conducted, both at primary and secondary sources of data. Secondary data is collected from different sources like Survey of India, Department Irrigation, Revenue Department, Department of Agriculture etc.

The primary data is generated through the field survey. The information has been collected with the help of household schedule. There are 383 households in the village, and its total population is 1975 (2011 Census of India).For collecting data 50 households hasbeen interviewed through purposive sampling, which includes households of present Sarpanch, 5 Panchs, ex-Sarpanch and local community belonging to the age group of 60-80.

Result and Discussion

Change in Irrigated Area

Table 1: Change in Sources of Irrigation

Irrigation Sources	Before dam (%)	After dam (%)
Rainfall	95.0	20.0
Perch Choe	4.5	0.0
Pond	0.5	0.0
Reservoir	0.0	80.0
Total	100.0	100.0

Source: Field survey,2016.

The village Parachh is greatly benefitted with the construction of dam. The dam was constructed in the year 1990. Before the dam, the agricultural productivity was dependent on the arrival monsoon. Whenever there is failure of monsoon it led to destruction of crops but after the construction of dam the crops sustained well and added a big chunk of income to the villagers.

The natural topography and landscape of the area enabled the planners to store the water at a higher altitude in such a manner that irrigation could be managed through pipes with the gradient force.

It was made to happen because the dam is located at higher level whereas the village is situated atlow-lying area. Thus, water is released from the dam for secondary storing in tanks constructed in the fields of the villagers.

The annual Govt. charges for supply of irrigation-water are to the tune of Rs 200 per 2 acre. Free irrigation-water availability is to farmers with landholdings less than 2 acre.

One water-storage tank caters to 2 to 3 families which they manage mutually. Thus, the irrigation from the dam has increased the productivity of crops but a shift is seen in terms of reduction of food crops to fodder crops, whereas the paddy crop is not sown in the village before and after the construction of dam. As the irrigation facility is available only for rabbi and fodder crops.

Before the construction of dam, the water for irrigation was available mainly from the rain fall but after theconstruction of the dam the village is completely dependent on the reservoir for irrigation. Hence the productivity of agriculture, flora and fauna has increased.

Change in Cropping Pattern

Table 2: Crop land categories, 1990

Details	Area in acres	% age of the Total Crop Land
Wheat	395.20	90
Fodder	32.60	3
Vegetable	12.20	7
Total	440	100

Source: Field survey, 2016.

Table 3: Crop land categories, 2016

Details	Area in acres	% age of the Total Crop Land
Wheat	359.8	81.8
Fodder	60	13.6
Vegetable	20.20	4.6
Total	440	100

Source: Field survey, 2016.

The project-village Perch has a strong agricultural bias in the life of its people.Almost all the people have agricultural landholdings which vary between 5 to 15 acres. Before the construction of dam, only rabi (wheat etc.) was grown in addition to fodder. The outputs of these crops were also sold for earning money.

After the construction of the dam, fodder-farming (Barseem) became the mainstay due to tilt in –favor of dairy-farming.Growth of wheat and pulses (*daal)* were minimized to non-commercial private use only. The dam-water was made adequately available for irrigation which boosted agricultural productivity in a big way.However,there happened a predominant diversion to more profitable dairy-farming for many reasons.

Before the construction of dam, crops were grossly damaged whenever there was a heavy rainfall.The village, being in low lying area was often inundated. The dam not only prevented flooding but stored water for agricultural purposes.

The study also shows that there is high growth of production of fodder in the village because of the construction of dam and irrigation facilities available to them. Yet very genuine increase is seen in the production of wheat and vegetable.

Change in Production of Milk
Table 4: Change in Production of Milk

Sources milk	Before dam (Liters)	After dam (Liters)
Cows	10	50
Buffaloes	150	950
Goat	2	0
Total	162	1000

Source: Field survey, 2016.

Unlike most of their counterparts in the rest of the state,the agricultural landlords and workers of this village have switched from paddy, rabbi crops over to fodder-crops like *Barseem* for sustaining milk-production as their mainstay.

According the current village-Sarpanch, people produce an average of 1,000 liters of milk every day in the village. However,the actual figure must be much bigger. Whereas,there were 1 to 2 milch animals in the pre-dam era,now averagely there are ten milch cattle in a household.

Many of nearby customers come on bicycles, scooters and cars and make retail purchase of fresh pure full-cream *(chuaavaan)* milk on a regular basis. Similarly, commercial milkmen on bikes and bicycles make wholesale purchases. Still more, branded milk-cooperatives **like** *Verka* also make bulk-purchases for their milk-processing plants.

Everything stated above started slowly changing after the construction of this dam in 1990. The untreated dam-based piped water-supply is sufficient for dairy-farming which necessitates growth of fodder and washing of animals as well as their sheds. Clean drinking water is obtained from tube-wells etc.

Thus, the production of milk has increased manifold after the construction of dam, as it gives them a big chunk of money. The future of many milk producing companies depends on the production of milk from this village. The production of milk increased from 162 liter to 1000 liter. Which is a big change that led the diversification of the economy of the village and it also improved the condition of the village. Hence people are less dependent on the government and gaining the state of self sufficiency.

Conclusion
This paper has made an effort to analyze the impact of dam on irrigation, crop productivity and milk production in the village Perchh. Dam has provide water for irrigation in both rabi and kharif seasons. The study shows that after the construction of dam the irrigation facilities and production of crops has increased.

The study also finds that the carrying capacity of the dam has decreased now-a-days, due to siltation by approx. 50% as per the Sarpanch of the village.Hence, the govt. needs to take steps to combat the problem of siltation so that the dam could be fully utilized for the purpose it is made.

Reference

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