Impact of Irrigation Projects on Agriculture Development (Rani Awanti Bai Lodhi Sagar Pariyojna)

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Abstract: This research is to understand the impact of irrigation project on agriculture development. Here we will study the impact of irrigation project – study conducted based on “RANI AWANTI BAI LODHI SAGAR PARAYOJNA”, district Jabalpur (M.P.) – India by studying the data collected from various source of government statistics books and websites.

We will also include the challenges and its possible solution in the irrigation project which impact the agro-production.

1. INTRODUCTION

Before understanding the Impact of irrigation project, we need to understand agro-development and then possible impact on the production by irrigation projects.

Increase in the production of crops is called as agro-development. To achieve agro-development or get an increase one should use improved variety of seeds, good fertilizers and pesticides, etc.

Irrigation projects are supposed to be life line for any district or any region or any state. Irrigation projects are meant to be increased development for any region as in India more than 70% population depend on agriculture as direct source of Income.

We observed that due to lack of irrigation project it is very difficult to achieve agro-development and ultimately overall development of people. If water resources are sufficient than one can convert barren land into fertile land with the help of irrigation projects. Not only agro-production increased but it helps to make self sufficient in food-stock as a nation.

Irrigation projects also useful for electricity production as well as fisheries production.

2. STUDY AREA

We conducted the research of “impact of irrigation projects on agriculture development” in Jabalpur (M.P.) India. Please refer Jabalpur district map as in MAP2 (a) and Rani Awanti Bai Lodhi Pariyojna location and elongation MAP2 (b).

MAP2 (a) – Jabalpur Map

MAP2 (b) – Bargi Dam map
Geographically Jabalpur is situated 23°10 N 79°56 E. Its total area is 5197 square kilometer. Altitude of Jabalpur is 1348 feet above the sea level. Its summer temperature is 47°C (maximum) and 21°C (minimum) while it varies from 27°C to 8°C in winter.

As per census 2011, Jabalpur district has a population of 2460714.

2.1. Objective of study

To understand increase in production by the project.
To study irrigated and not-irrigated area and its impact on production.
To study the increase in production by increasing irrigation facilities.

2.2. Research methodology and data collection

To study this research, data have been collected based on secondary data collection method from various District statistics papers and agriculture data from government websites. To analyze the data simple mathematical calculations are used.

2.2.1. Irrigation Project

Irrigation is a method by which water is distributed to soil naturally or artificially, which helps to increase in agriculture and plant production. Irrigation project implement as large, medium or small scale. In case of less than average rains or in case to distribute sufficient and required water for irrigation various small canals are built, which directly help agriculture.

Not only, irrigation project, help to fertile lands, but it also help to convert non-fertile land into fertile land to boost the agriculture and its production. The main purposes of irrigation projects are to distribute sufficient water and to avoid crisis.

Jabalpur district is agriculture oriented district and the producer of many food grains and agriculture products. To increase the production of agriculture irrigation facilities are important to be provided time to time. There are many projects in Jabalpur district like – Rani Awanti Bai Sagar Pariyojna, Apar Paryat Sichai Pariyojna, Devri Talab Pariyojna, Hatoli Talab Priyojna and Chhatarapur Talab Pariyojna.

There is an important place to irrigation projects in Jabalpur which is not limited to agriculture irrigation, but extended to electricity production and fisheries production, which help to boost the economical advantages to make it self-dependent

2.2.2. Rani Awanti Bai Sagar Pariyojna

Rani Awanti Bai Sagar Pariyojna project is built on, so called Madhya Pradesh life line “Narmada” river. Rani Awanti Bai Sagar Pariyojna is famous as “Bargi Dam”.

Bargi dam is 43K.M. from Jabalpur situated near Mankeri Village. There are two major canals are subdivided as left Canal and Right Canal.
The canal which extended from left of dam, which is 17 K.M., cover Jabalpur, Patan of Jabalpur district, and this canal also covered other district as well like Narsingpur district. This canal serves the irrigation possibilities on approx. 1.57 lack hectare land.

The right canal serves approx. 2.45 lack hectare land of Jabalpur as well as Katni, Satna and Rewa district.

In total these two canals help approx. 4 lack hectare lands for annual irrigation.

The first stone placed for Bargi dam in 1975 and it continue to 1988, in 1988 two electric projects of 45 MW each. Till December 2002, Government had collected the revenue of 1602 crore.

This project also commits the drinking water as well as this helps Government to collect additional 70 lack revenue from fisheries production, which increased up to 325 tons.

Rani Awanti Bai Paiyojna is a large project which is helping into additional agriculture production of approx. 17.13 lacks MT which serves 1.57 lack hectare and 2.45 lack hectare land with help of left and right canals respectively.

The possibilities of irrigation lands are changed from this project year by year. We can also see some data between two years which shows the change between two years for “left canal and right canal” in table 2.2.2(a) and Graph 2.2.2(a)

<table>
<thead>
<tr>
<th>Canals /Year</th>
<th>Kharif (in hectare)</th>
<th>Rabi (in hectare)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Canal</td>
<td>12080</td>
<td>16245</td>
</tr>
<tr>
<td>Right Canal</td>
<td>3167</td>
<td>17000</td>
</tr>
</tbody>
</table>

In above table and graph 2.2.2(a), we can observe that there is an increase of irrigation land than in 2014-2015 to 2015-2016 in Kharif from 12080 to 16245 in left canal and from 3167 to 17000 in right canal area, similarly we can observe increase in irrigation area in Rabi season. Increase in irrigation facility and its area directly imply to increase in production of agriculture as well as fisheries production and similar industries.

2.3. Problems

There are many advantages of the irrigation projects, so as for the Rani Awanti Bai Sagar Pariyojna.

While studying its advantages, we have also observed some problems for this project which are as under;

2.3.1-Bad economic conditions of farmers to collect resources for better utilization of water from Irrigations Project.
Impact of Irrigation Projects on Agriculture Development (Rani Awanti Bai Lodhi Sagar Pariyojna)

2.3.2 - Dirtiness in canals from projects like plastics which can create obstacles in supply of water to the agriculture lands.

2.3.3 - Natural outbreaks which can spoil the crops.

2.3.4 - Shift of people from Project land.

2.4. Solution

We tried to find out the possible solutions for the problems given in (2.3). Please refer the possible solutions as under;

2.4.1 – Bad economic conditions of farmers: Government are running many schemes which can provide easy loans to farmers by which they can buy pipes and sprinklers which can better supply the waters to farm lands, they can also buy the electric pumps on subsidies rates. “Kisan Credit cards” are also a good step to help farmers & to provide economic supports as a credit.

2.4.2 – Dirty Canals: For proper and healthy supply of water we need to maintain the rivers, dam and canals clean and free from the wastes like plastic, industry wastes, etc.

To maintain cleanliness of water in rivers, so in dams, so in canals (i.e. all types of water resources), Government has launched Swaksha Bharat Abhiyan with the help of every citizen at every level. Its impact and awareness are positive. M.P. state Government also “Narmada Bachao Abhiyan” which is positively showing its clean impact on Narmada and this project.

2.4.3 – Natural Outbreaks: To swift recover from natural outbreaks Government announce the insurance of crops which can at least help to recover the investments of farmers.

Additionally, to protect them from natural Outbreaks, Government is also making aware farmers to make their extra/additional income from fisheries production, poetry farms and other small scale productions which motivate farmers in case of natural outbreaks.

2.4.4 - Government provided the monitory benefits to the people whose lands and homes are in the projected area. But to fulfill their emotions to mother land is always debatable in the benefit of mankind.

3. CONCLUSION

While studying the impact of Irrigation Projects on Agriculture development, we found many pros and cons.

There are always some advantages and disadvantages of any project, but as far as we understand from data Rani Awanti Bai Sagar Pariyojna has more advantages as it provides sufficient water to farmers for irrigations which not only making them economically independent but contributing in the income of people as a nation as agriculture production increases due to this project/Pariojna.

REFERENCES

[4] Rani Awanti Bai Sagar Pariyojna Prativedan Jabalpur
Shruti Tiwari is a research scholar, department of Geography, RDVV Jabapur (M.P.) doing PhD and have done many seminars on Geography.