

“IMPACT OF BHIMA –SINA RIVER JOINT CANAL ON SHIRAPUR LIFT IRRIGATION SCHEME AND CHANGING CROP UNDER AERA IN NORTH SOLAPUR TAHSIL : A GEOGRAPHICAL ANALYSIS”

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ABSTRACT:

The Indian Rivers Inter-link is a proposed large-scale civil engineering project that aims to link India's rivers by a network of reservoirs and canals and so reduce persistent floods, poverty and increase agricultural development, irrigation development and agro-based industries development in some parts and water shortages in other parts of India. The river Bhima and river Sina are the important river basins in Solapur District (Maharashtra). The Bhima-Sina River Joint Canal starts at Kandalgaon (near Ujani Dam) and meets to Sina River near Kavhegaon in Madha Tahasil. The construction of canal was started in 1995-96 and completed in 2003. Due to its length considered this canal tunnel is first rank in Asia.

The present paper analyses the impact of Bhima-Sina river joint canal on Shirapur lift irrigation scheme and change under crop area in North Solapur tahsil of Solapur district. The result gives the positive changes in study region.

Key words: River link project, irrigation development, crop area

INTRODUCTION:

In a large country like India, a big project to connect about 30 big rivers & canals has been started under the supervision of International Water Management Board. This work has been named National River Link Project. In spite of it, that India is known as an agriculture dominant country but unfortunately, there is no

right distribution & management of river water. That's why one third of our country's agriculture is destroyed because of drought or floods. Obviously its adverse effect is on the farmers & at the same time on the economy of our country. The interlinking of rivers (ILR) programme is a major endeavor to create additional storage facilities and

transfer water from water-surplus regions to more drought-prone areas through inter-basin transfers.

The only aim of this largest river link project of the world is to make use of the water that goes waste in flood & with the help of this River Link Project assure good use by make available water to those areas that face drought & acute scarcity of water. It is assumed that if this largest project, being worked in three phases, is completed & regional politicians cooperate fully then there will be increase in the agricultural production & at the same time increase in national agricultural income. The people will get relief from the havoc caused by floods & drought. And above all, the people will get clean drinkable water. **(Tanveer Jafri - 5/14/2008 River Linking Project of India).**

The construction of canal is important source of irrigation in which region where water is utilized by gravity, flow. It requires almost plane topography having lesser degree of

slopes, and it is found in the Bhima-Sina Rivers basins.

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It is proposed to give irrigation benefits to 10000 ha of area in North Solapur, taluka of Solapur district and Tuljapur taluka of Osmanabad district by lifting water from Shirapur KT weir. The Shirapur KT weir is fed by Bhima-Sina link. It is proposed to lift water from river Sina at Shirapur KT weir near village Shirapur in two stages. This include first lift of water with 3.770 km long rising main from RL 439 m to 483.35m having static head of 44.35m. From delivery chamber of 10.92 km in length is

proposed. At the end of main canal i.e. at 10.92 km stage II lift is proposed near village Mohitewadi. Stage II includes lifting of water by 2.55 km long rising main from RL479.75m to (503 m) having a static head of 23.30m. After second lift RBC of 18.425 km and LBC of 16.040 km are proposed. The plate no. 1 shows that the Shirapur lift irrigation scheme on Sina River.

The present paper analyses the impact of Bhima-Sina river joint canal on Shirapur lift irrigation scheme and changing crop under area in North Solapur tahsil of Solapur district. The result gives the positive changes in study region.

STUDY REGION:

The North tahsil is located in the east of the Solapur district. The latitudinal extension is $17^{\circ} 34' 30''$ N to $17^{\circ} 58' 30''$ N and longitudinal extension is $75^{\circ} 44' 0''$ E to $75^{\circ} 56' 0''$ E. The total geographical area is 736.3 sq.km. The average rainfall of North Solapur tahsil is only 617 mm. The total population of study area was 209953 in 2011. The population density of study region is 1415 sq.km. The sex-ratio of study region is 942. The literacy rate of study region is 82 % in 2011. The fig. no. 1 shows the study region.

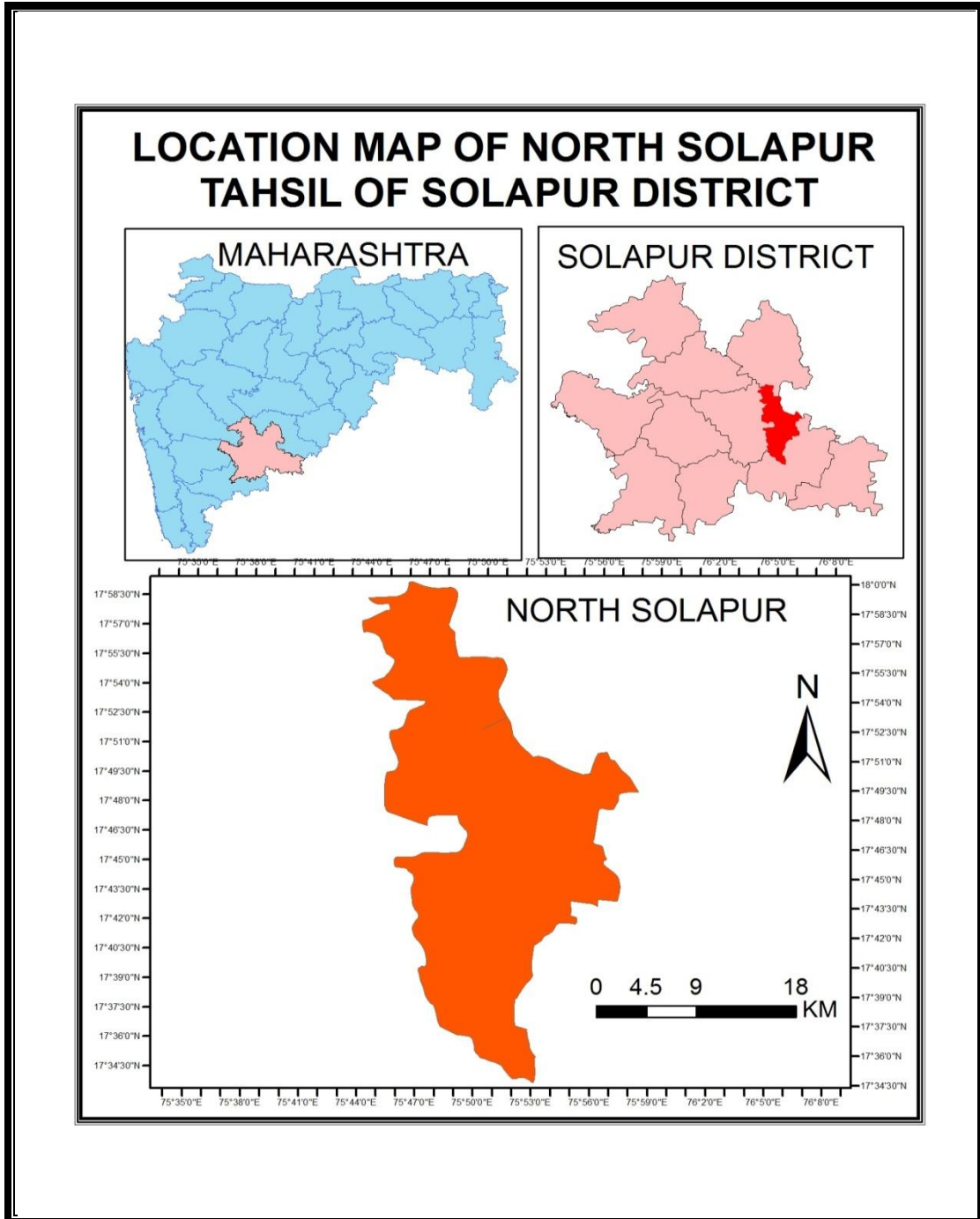


Fig. No. 1



Plate no. 1 Shirapur lift irrigation scheme

OBJECTIVE:

The following are the important objectives behind this research paper.

1. To study the importance of river link and lift irrigation scheme in study region.
2. To study change crop under area before and after construction of Bhima –Sina river joint canal and Shirapur lift scheme in study region.
3. To assess the changing cropping pattern in study region.

DATA COLLECTION AND METHODOLOGY:

The present study is based on secondary data. The data is collected from Solapur district Statistical department, North Solapur Panchayat Samiti office and 2011 census of Solapur district. The different quantitative techniques are used to analyze statistical data.

INTERPRETATION:

The following table shows the impact of irrigation development in changing crop under area and changing cropping pattern in North Solapur tahsil.

Table No. 1: Crop area changes in North Solapur district.

Sr.No.	Crop Name	Under Crop area (in hect.)		Change
		1992-92	2012-13	
1	Wheat	1480	2849	1369
2	Jawar	21210	24150	2940
3	Bajara	680	998	998
4	Maize	1750	1645	-105
5	Cereals	2860	2540	-320
6	Sugarcane	760	2780	2020
7	Banana	110	214	104
8	Graphs	125	180	55
9	Onion	190	490	300
10	Vegetables	460	850	390

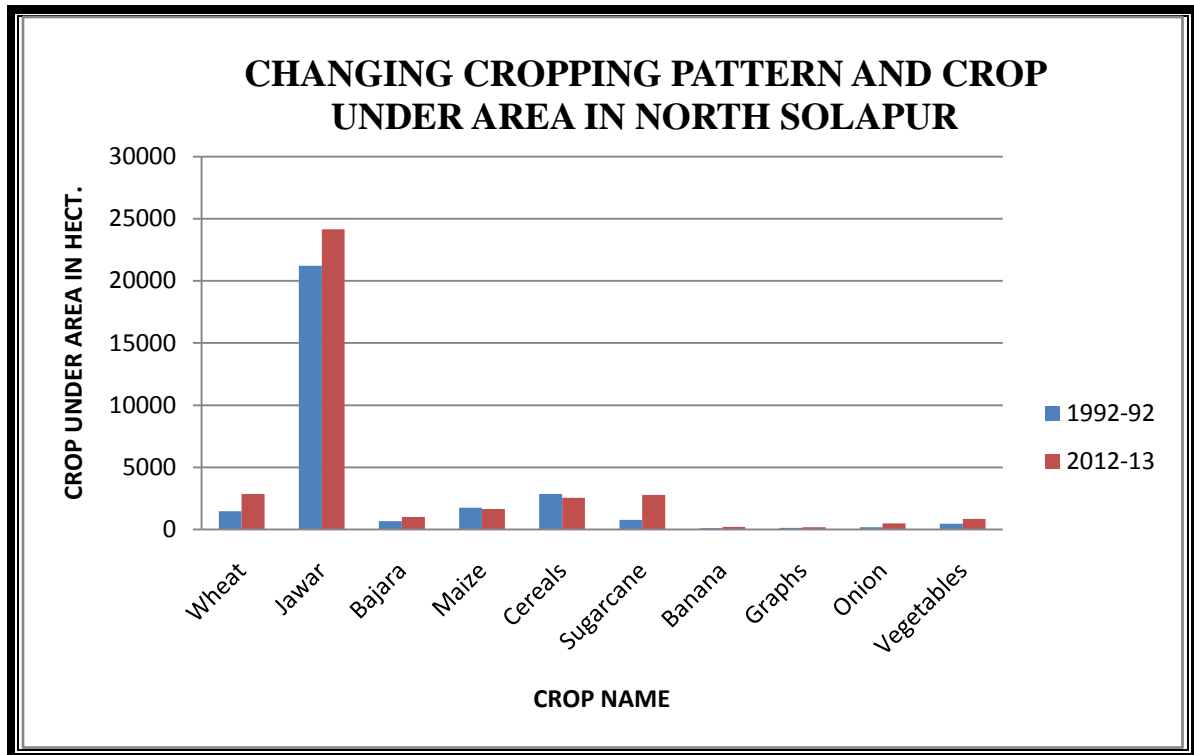


Fig. No. 2

The table no. 1 and fig. no. 2 shows that before and after construction of Bhima-Sina river joint canal and Shirapur lift irrigation scheme the cropping pattern is changed and crop under area is increased in North Solapur tahsil of Solapur district. The Wheat, Jawar, Bajara, Sugarcane, Banana, Onion etc. crops under area increased comparatively 1992-93 to 2012-13 data. Due to the irrigation development the cash crop like Sugarcane, Banana and Onion crops

under area is increased in North Solapur tahsil of Solapur district. This means that the cropping pattern of North Solapur tahsil is changed.

CONCLUSION:

Irrigation development impacted on the cropping pattern in study region. Shirapur lift irrigation scheme shows that crop under area changes and changing cropping pattern in study region. The present paper analyses the

impact of Bhima-Sina river joint canal on Shirapur lift irrigation scheme and irrigation development in North Solapur tahsil of Solapur district. The result gives the positive changes in study region.

REFERENCES:

1. Tanveer Jafri (2008): “River linking project in India” Northern book centre, New Delhi.
2. Shanani L. (1987): “The Impact Of Irrigation” John Wiley and Sons Publication, London.
3. Socio-Economic abstract of Solapur district 1992-93, 2012-13.
4. Websites:
 - i)www.riverlinkinindia.in
 - ii)www.solapurirrigation.in