

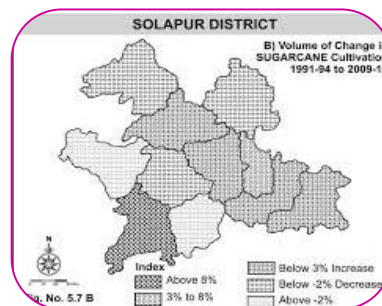


IRRIGATION PATTERN IN MALSHIRAS TAHSIL OF SOLAPUR DISTRICT: A GEOGRAPHICAL ANALYSIS

Dr. D. C. Kamble¹ and Mr. Santosh P. Mane²

¹Associate Professor & Head, Department of Geography, Vivekanand College, Kolhapur.

²Asst. Prof. & Head, Dept. of Geography, Sameer Gandhi Kala Mahavidyalaya Malshiras.



ABSTRACT :

Initially the objective of irrigation was confined to supply water to crops whenever it requires. Many regions of the earth experiences uneven distribution and irregularity of rainfall. There are densely populated regions on the earth surface depends on agriculture. In such regions, provision of irrigation is important aspect. Irrigation is necessary in traditional agriculture to overcome droughts scarcity of rainfall. In modern agriculture need of irrigation increased tremendously. Irrigation constitutes one of the most effective technical means of the raising agricultural production in the developing countries. So in the present research paper, the major objective is to understand the irrigation pattern in Malshiras tahsil.

KEYWORDS : Wells, Tube Wells, Lake-Tank, Surface water irrigation, Canal irrigation, Lift irrigation.

INTRODUCTION

Irrigation constitutes one of the most effective technical means of the raising agricultural production in the developing countries. Where irrigation by gravity is possible, much work of installing facilities can be carried out by manual labour, through there are obvious economic advantages, even in countries with very low wage level, in using technical aids in the constructional and earth moving works. Where the necessary water. Cannot be brought to the land to be irrigated slowly by the force of gravity, it is necessary use pumping installation. Mechanical source of power has considerably increased the efficiency of water pumping and have extended the use of irrigation by making. It possible to use ground water located at considerable depth and with the aid of sprinkling arrangement, to brings irrigation to areas that, could otherwise not have been brought under cultivation except at uneconomically high cost. There is still avery large potential field for development by means of this system. Drought prone area of Maharashtra like most of other parts of the country is basically agricultural and rural. However agriculture of this area dissipate limited irrigation facilities, coarse, shallow and poor quality soil and precarious and erratic rainfall has given way to a verity of crop patterns to adjust with prevailing best possible alternative cropping system. In view of increasing pressure of population on land and the growing demand for food and other materials. Agriculture land use refers the proportion agriculture enter year. The study of agricultural land use not only provides base for understanding the complex structure of agriculture landscape of the study region but also helps for better planning.

OBJECTIVE

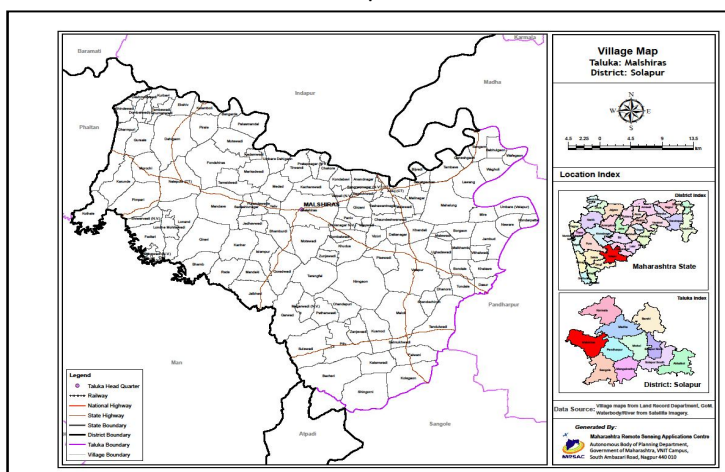
1. The irrigation development in the be Malshiras tahsil.
2. Analysis the irrigation pattern of Malshiras tahsil besides the sources of irrigation, the regional disparities in irrigation and irrigation impact on agriculture land are the specified objective of the study.

Source of data and information

The secondary of data were collected from socio economic review and District Statistical Abstract of Solapur, District Census Handbook, Village Tlathi Office and Agriculture officers, Panchayat Samiti Malshiras (Minor Irrigation L.S. Sub Division Malshiras), Department of Irrigation, Malshiras Tahsil and Minor Irrigation State level (L.S.) Sub Division Akluj and Z. P. Solapur.2015.

STUDY REGION

Malshiras is one of the 11 blocks of Solapur district and it extends approximately between latitudes 17° 36' North and 18° 2' north and between longitudes 74° 41' east and 76° 18' east. The block is on the western side of the district. Malshiras tahsil is situated on the west fringe of Solapur district and lies entirely in Nira basins. The tahsil is bounded on the north by Indapur tahsil (Pune district) on the north-east Madha tahsil, on east by Pandharpur tahsil, on south by Sangola, on west by Man tahsil (Satara district) and north-west side Phaltan (Satara district). In the west part of Malshiras tahsil Mahadeo hilly range pass north to south for a few kilometres and Sulski (715m) is height pick in Malshiras tahsil and few scattered hills in Malshiras tahsil. The tahsil in general has flat or undulating Nira terrain. The Solapur district covers geographical area of 14,844.6 sqkm. This is 4.82% of the total area of Maharashtra State. Out of the total area of district 338.8 sqkm (2.28%) is urban area whereas remaining 14505.8 sqkm (97.72%) is rural area. The geographical area of Malshiras tahsil is 1522.2 sqkm, which is 10.4% of the total area of Solapur district.



IRRIGATION PATTERN IN MALSHIRAS TAHSIL (Area in Hectares)

| Sr. No. | Circle | Total Geographical Area | in % | Canals Area | in % | Well | in % | Tanks /Lakes Area | in % | KTW | in % | River | in % | Area Irrigated by Source | in % | Total Unirrigated Land Area | in % | Net Area Sown | in % |
|---------|------------|-------------------------|------|-------------|------|---------|------|-------------------|------|--------|------|--------|------|--------------------------|------|-----------------------------|------|---------------|------|
| 1 | Mals hiras | 16727.87 | 10.7 | 2889.73 | 10.8 | 3785.06 | 9.7 | 100 | 2.8 | 181 | 5.3 | 307 | 13.2 | 7262.79 | 10 | 3818.7 | 10.3 | 1108.149 | 10.4 |
| 2 | Islam pur | 21082.55 | 13.4 | 2149.32 | 8.0 | 2058.91 | 5.3 | 105 | 2.9 | 0 | 0.0 | 0 | 0.0 | 4313.23 | 6 | 9632.29 | 25.9 | 1394.552 | 13.1 |
| 3 | Velap ur | 21886.2 | 14.0 | 5581.91 | 20.8 | 8399.17 | 21.6 | 815 | 22.8 | 122 | 36.0 | 35 | 1.5 | 1605.308 | 22.8 | 2375.19 | 6.4 | 1842.827 | 17.4 |
| 4 | Akluj | 10139.31 | 6.5 | 2694.2 | 10.1 | 4339.86 | 11.2 | 473.77 | 13.2 | 0 | 0.0 | 131.05 | 5.6 | 7638.88 | 10.9 | 1206.22 | 3.2 | 8845.1 | 8.3 |
| 5 | Lawa ng | 9141.9 | 5.8 | 2741.27 | 10.2 | 3079.31 | 7.9 | 6.88 | 0.2 | 138.83 | 40.9 | 652 | 28.1 | 7867.76 | 11.2 | 924.77 | 2.5 | 7472.53 | 7.0 |

| | | | | | | | | | | | | | | | | | | | |
|-------|-----------|-----------|------|-----------|------|-----------|------|----------|------|---------|------|----------|------|-----------|------|---------|------|------------|------|
| 6 | Maha lung | 12473.27 | 8.0 | 3168.59 | 11.8 | 3846.22 | 9.9 | 227.4 | 6.4 | 293.8 | 8.6 | 869.7 | 37.5 | 3821.9 | 5.4 | 625.33 | 1.7 | 4447.23 | 4.2 |
| 7 | Piliv | 22476.09 | 14.3 | 426.39 | 1.6 | 4127.84 | 10.6 | 670 | 18.7 | 129 | 3.8 | 0 | 0.0 | 5353.23 | 7.6 | 9343 | 25.2 | 1469.6.23 | 13.8 |
| 8 | S. Nagar | 15073.94 | 9.6 | 2872.32 | 10.7 | 3038.34 | 7.8 | 782 | 21.9 | 184 | 5.4 | 197 | 8.5 | 7073.66 | 10.1 | 3487.45 | 9.4 | 1056.1.11 | 10.0 |
| 9 | Nate pute | 16281.21 | 10.4 | 703.05 | 2.6 | 3355.61 | 8.6 | 381.8 | 10.7 | 0 | 0.0 | 0 | 0.0 | 4440.46 | 6.3 | 4087.09 | 11.0 | 8527.55 | 8.0 |
| 10 | Dahigaon | 11588 | 7.4 | 3546.4 | 13.2 | 2819.01 | 7.3 | 15.69 | 0.4 | 0 | 0.0 | 130 | 5.6 | 6511.1 | 9.3 | 1623.66 | 4.4 | 8134.76 | 7.7 |
| Total | | 156870.34 | 10.0 | 2677.3.18 | 10.0 | 3884.9.33 | 10.0 | 357.7.54 | 10.0 | 339.8.1 | 10.0 | 232.1.75 | 10.0 | 7033.6.09 | 10.0 | 37123.7 | 10.0 | 1061.39.79 | 10.0 |

*KTW-Kolhapuri type of Bhandara

Source-secondary of data and Compiled by Rescher(2015)

IRRIGATION TYPES MALSHIRAS TAHSIL

The main source of irrigation in the Districts Lake, tanks, river, canal and wells & Tub wells. There are imbalances in irrigation development in Malshiras tahsil due to the natural as well as created imbalance in irrigation sources. The natural imbalances are caused due to the relative advantages and disadvantages of regions with respect to irrigation sources. These natural differences in regions can be described as regional disparities. The sources of irrigation in Malshiras tahsil is classified as follows, irrigation Sources.

CANAL IRRIGATION

Canal irrigation is very important in agriculture of Malshiras tahsil. It is wealth their tahsil, all Cercal mainly two rivers are important i. e. Bhima and Nira river. The western system seasonally. Recent development of Ujani Project and Vir- Bhdgr Project are also providing water Malshiras tahsil. The highest irrigated area in Malshiras tahsil mainly Velapur Cercal 5581.91(21.8%), Dahigaon circle 3546.4(13.2%) and lowest Natepute Cercal 703.05(2.6%) and Piliv Cercal 426.39(1.6%). In the tahsil almost 26773.18 (36%) hectares area under Canal Irrigation.

WELL AND TUBE WELLS IRRIGATION

The distribution of wells and Tube wells irrigation is different according to the tahsil. The Velapur circle 8399.17(21.6%), Akluj circle 4339.8/6(11.2%) are the two highly irrigated by the wells and tub well and lowest Dahigaon Cercal 2819.01(7.3%), Islampur Cercal 2058.91(5.3%) in the. In the tahsil 1138 wells and 763 tub well are available to the irrigated. Most of tahsil are the medium, irrigated land by wells and tub wells. In the Malshiras tahsil highest irrigation source of Well and Tube wells irrigation 38849.33 (52%).

TANKS AND LAKES IRRIGATION

The distribution of tanks and lakes irrigation is different according to the tahsil. The Velapur circle 815 (22.8%), Sadashiv Nagar circle 782(21.9%) are the two highly irrigated and lowest Dahigaon Cercal 15.96 (0.4%), Lawang Cercal 6.88(0.2%) In the Malshiras tahsil 3577.54 (4.8%) area is irrigated by the Tanks and Lakes irrigation.

KYW BANDHRA

The distribution of KYW Bandhra is different according to the tahsil. The Lawang 1388.3(40.9) Velapur 1222(36.0%) are the two highly irrigated and lowest Natepute, S. Nagar, Velapur circle no KTW Irrigation in the. In Malshiras tahsil 3398.1 (4.5%) area is irrigated by the KYW Bandhra.

SPATIAL DISTRIBUTION OF IRRIGATION

The problem of irrigation has been an important one concerning the Solapur district as well as Malshiras tahsil since long. Agricultural activities in the district are still dependant on the varies of monsoon. At a present the main source of water supply in the district are wells, tub wells, watertanks, KTW Bandhra,

and canals. The spatial distribution of Malshiras tahsil is uneven. Highest irrigated by source area in Malshiras tahsil Velapur 16053.8 (22.8%), Lawang 7867.76 (11.2%), Dahigaon, Malshiras 3818.7 (10.3), and lowest irrigated area Mahalung 3821.9 (5.4%) and total area of by source irrigated 70336.09 hectares. Highest unirrigated area Islampur 9632.29 (25.90%) and lowest Dahigaon 1623.66 (4.4) and total unirrigated area is 37123.7 hectares. Followed by Velapur 18428.27 (17.4%), Piliv 14696.23 (13.8%) and Islampur 13945.52 (13.1%) are highly net sown area circle in the tahsils and Mahalung 4447.23 (4.2) lowest net sown area.

CONCLUSION

Malshiras tahsil Lake-tanks, river, wells & Tub wells and cannel five major irrigation facilities are available. The irrigation situation of Malshiras tahsil satisfactory come to in 2014-15 area under crop 106139.79 in Malshiras tahsil to total 9.78 % Sheer of District. In this time Solapur district 1084596 hectares under Crop.

Malshirastahsil irrigation facility is very good but topography of my Malshiras tahsil make variable situation western part of tahsil of natural resources Canal irrigation and river irrigation facility is not available Malshiras Tahsil is mainly under rain Shadow area but Nira river and Bhima river right Bank Canal irrigation system give fulfil water of agriculture in my Malshiras.

Special need to lift irrigation system in western part of Malshiras Tahsil mainly Piliv circle and Islampur Circle in this area not available of river irrigation system and Canal irrigation system. For improving irrigated area and agriculture production, it is very essential to inform the farmers about the facilities provided by government and cooperative agencies i.e. loans and subsidy for the wells etc. the groundwater survey and development agency should be providing information regarding the water table and for the location the sites for the wells. To avoid water losses through evaporation, seepage, the crop should be irrigated by drip and sprinkler method.

References

1. Pawar C.T. (1989) Impact of Irrigation: A regional perspective, Himalaya Publishing House, Bombay. Pp-23-26
2. Majid Hussain (2004) Agriculture Geography, Rawat Publication Pp- 217 to 241.
3. Mohammad Shafi (2006) Agriculture Geography', Pearson Education Pp- 110-112
4. Jasbir Singh & Dhillon (2004) Agriculture Geography', Tata McGraw Hill publication, pp-251-254r
5. Patil P. N. (1986) Agriculture in Drought prone Area of Maharashtra State; A case study of Solapur District. M.Phil. dissertation submitted to Shivaji University, Kolhapur. Pp. 34-49.
6. Socio-Economic review and district Statistical abstract of Solapur District 2004 – 20005. Pp 17-41
7. Williamson A.V. (1925) Irrigation in Indo- Genetic Plain, Geographical Jiyrb.
8. Todkari G.U. (2010) irrigation pattern in Solapur district of Maharashtra: a geographical Analysis, geoscience research ISSN: 0976–9846 & e-ISSN: 0976–985, vol. 1, issue 2, 2010pp-22-27.
9. Ali, Mohamad (1978) "Studies in a g r i cultur a l Geography "Rajesh publication, New Delhi, PP73-75
10. Government of Maharashtra (1981, 1991, 2001) "Socio-Economic Review and Statistical Abstract of hmednagar District"
11. Gurjar, Ramkumar (ed. 1990) "Geographical Perspective on Irrigation Rawat Publications, Jaipur PP. 83-87
12. Singh, J and Dhillon, S.S. (1984) "Agricultural Geography" Tata mc. Graw- Hill Publishing company Ltd. New Delhi PP. 106-108. Socio-Economic Review of Solapur District 1971, 1981, 1991, 2001.
13. Weaver, J.C. (1954) Crop Combination Regions in Middle West. The geographical Review of India; 44(a), P- 175.