

CHAPTER -VI

**CONCLUSION AND
RECOMMENDATIONS**

- 6.1 Introduction
- 6.2 Conclusion
- 6.3 Recommendation

6.1 INTRODUCTION :

The sustainable agricultural development depends upon water supply. Thus irrigation is one of the important and valuable components of progressive agriculture. Generally, irrigation means artificial application of water to land for growing crops is known by term "Irrigation". It encourages the farmers to adopt scientific technique and go for more intensive cropping pattern. In brief, irrigation happens to be the key input for the development of agriculture.

The present investigation is a attempt to examine the relationship between irrigation and agriculture in the command area of lower reaches of Chikotra irrigation project, in southern part of Kolhapur district of south Maharashtra. The Kolhapur district is one of the agriculturally developed parts of the state. This is also known for its development of irrigation where natural flow of river has been tapped by constructing small dams across the river courses. The objectives are to describe the spatio-temporal development of irrigation in relation to physico-socio environment, and to examine the impact of irrigation on the use of mechanical and agro inputs, landuse in general and cropping pattern in particular. To be more specific overall changes and development of agriculture in the region.

There is uneven distribution of irrigation facilities which has been controlled by physical social and economic factors. The previous analysis indicates that the lower reaches of Chikotra basin presents various physical characteristics which have controlled by intensity and magnitude of irrigation. Moreover, the narrow fertile flood plain offers favourable environmental

conditions for irrigation developments. The region under investigation has 33.69 percent of the total cultivated area under investigation. (fig no 3.3). Therefore, there is scope for bringing additional cultivated area under irrigation by adopting modern techniques. The rainfall distribution in the area is uneven and is mainly south west monsoon, which is concentrated (93 percent) in the months of June to September. The post monsoon period with its acute scarcity conditions invites the need of irrigation to modern agriculture.

6.2 CONCLUSION :

The previous analysis reveals that the fair concentration of rainfall in the rainy season but the region experienced gaps of dry spell. The dry months are characterized by the shortage of water for crops . This has created the need of irrigation in the region. Therefore, the region has only alternative to store rainfall water within the K. T. weirs (Bandhara) and regulating it when it is required to standing crops.

The river Chikotra controls the drainage of basin. The network of drainage is almost uniform in the region determining the water regime. The profitability of irrigation is also linked with soil characteristics. The fertile soils along the river coarse particularly in the north east have shown high intensity of irrigation. However, the poor coarse shallow soil is observed in two side of eastern and western parts the of region. These two sides have discouraged irrigation developments. The infertile soils of the eastern and the western have led to poor productivity of crops.

The preceding analysis reveals the fact that the region possesses rich water resources. However they are inadequately used inviting optimum utilization. Obviously, this offers greater opportunities for the utilization of irrigation potential. The field work revealed the fact that the traditional methods of irrigation in the region have lead to wastage of water. The awareness among the farmers for the proper management and rational utilization of water resources is the urgent need of region.

The general landuse pattern shows that 85.50 percent of land area is useful for agriculture. The overall change in the general landuse area is about 4.62 percent. The major landuse category increased is net area sown by 4.62 percent.

There are different sources of irrigation in the region (Chapter III). The lift irrigation is mainly confined to the flood plain of two side of the river and also north eastern (Khadakewada, Galagale, Metage) and southern part (Kapsi, Nandyal) of the region. The well irrigation is dominant along two side of the river and also north eastern part of the region (Fig no 3.1 3.2). The other sources (diversion dams) are dominant in some part of north and south. Of the total irrigated area, lift irrigation account for 64.51 percent followed by well irrigation (27.7%) and other sources (8.42) percent. In view of topographic conditions, lift irrigation seems to be suitable source of irrigation.

In the development of irrigation facilities there is much variation. The overall intensity of irrigation is 33.69 percent. The north and central part (Khadakewada, Lingnur, Metage) of the region have shown relatively high intensity of irrigation where

as it is moderate in the village Galagale and central west part of the region (Arjunwada, Nandyal). The low intensity of irrigation is confined to the hilly portion, in the south east part and north west part of the region (fig no 3.3).

The present development of irrigation is according to the need of area is shown by the study regarding the development and requirement of irrigation. The facilities of irrigation in the year 2005-06 have increased most as compared to 1995-96.

In the region, the irrigation has ~~always~~ positive impact on the agricultural productivity of irrigated crops, fertilizer consumption and level of mechanization are favorable affected by irrigation. (Chapter IV). The high productivity of crops is largely affected by perennial and regular irrigation facilities. The fertilizer consumption is directly related and increased because of availability of irrigation.

The ~~another~~ most crucial characteristic of irrigated area is mechanization of agriculture. Although traditional implements are in the use, the modern and improved implements are increasingly used in the region. After the completion of Chikotra Irrigation project the irrigated cropping pattern has been changed by about 25.76 percent. The five K.T weirs constructed in lower parts, have ~~enabled~~ to operate lift irrigation there by sugarcane crop scenario has changed drastically.

6.3 RECOMMENDATION:

On the basis of finding of the study, following recommendations are made for the improvement of the study region.

As the region having fair network of drainage, the small earthen dams at a regular interval, on the streams, nalas could be constructed on co-operative basic or with the assistance of Zilha Parishad, the water of which could be useful for rabi crops.

The sloppy lands at the foot hills could be converted into terraces and the irrigation could be extended to these terraces by setting lift irrigation schemes of heavy capacity. This, however, would require heavy capital outlay which could be met only by co-operatives and Government agencies.

Though there is significant increase in irrigated area, there remains still large scope for bring additional area under irrigation. inspite of rich underground and surface water resources, the region is lagging behind in irrigation development. It needs to inform the farmers about the facilities provided by the government or co-operative agencies regarding bore-wells, blasting, loans and subsidies for wells etc.

In this regard, it is recommended that extension facilities and other guidance to the farmers need be extended through agro service centres to be established at nodal locations.

There seems to be a limited scope for bring additional and land under plough. Hence intensity of cropping needs to be increased by adopting multiple cropping and rabi cropping.

Similarly, among irrigated cropping grass needs to have some place which will enable to feed milching animals. This will help to develop dairy as an subsidiary occupation of the farmers.

Although, the scientific method of irrigation like sprinkler and drip for checking the misuse of water are relatively very expensive, they may be adopted considering the need of water in the region. A well defined strategy may be planned for the rational use of water resources in the region. All the recommendation would defiantly help to improve the agricultural situation in the region.