CHAPTER - VI

SUMMARY AND CONCLUSION

Agriculture remains to be the back-bone of Indian economy. Among different components of agricultural development irrigation has been given top priority in resource dispersion programmes. After independence, irrigation works were divided between India and Pakistan, and as a result India got more than its share of population but less than its due share of land and irrigation resources.

The purpose of irrigation before independence was to stabilise agricultural output. Now, irrigation plays both protective and productive roles. Irrigation gained more importance with the launching of Five Year Plans in India. Since independence, a significant number of major and medium irrigation projects were taken-up in each plan. These projects are different in size and design, reflecting mainly the water sources and other resource endowments of the region/locality accounted for different rates of irrigational development.

During the Sixth and Seventh Five Year Plan not only minor irrigation was separately shown in plan documents but also its importance was emphasised. Outlays on minor irrigation in all drought prone States in Seventh Plan significantly increased when compared with Sixth Plan outlays in India.

Agriculture plays a predominant role in Andhra Pradesh. Irrigation is an important factor to stabilise agriculture.
The emergence of new technology in agriculture involving High Yielding Varieties of seeds has increased the demand for water. There has been an institutional support in the development of irrigation in the State. The important institutional agencies engaged in the development of irrigation are Andhra Pradesh Irrigation Development Corporation, Andhra Pradesh State Cooperative Rural Irrigation Corporation Limited and Panchayat Raj Department. Massive investments have been made in the development of irrigation under different Five Year Plans in Andhra Pradesh.

It seems planning in Andhra Pradesh is mainly planning for major and medium irrigation and power. The outlay under different Five Year Plans of Andhra Pradesh instead of being evenly distributed over various common and traditional heads of developments seem to be highly skewed in favour of irrigation and power.

Minor irrigation sources account for half of the total irrigation in the State of Andhra Pradesh. However, expenditure on minor irrigation under most of the Five Year Plans in Andhra Pradesh never crossed even 20 per cent of the total expenditure on irrigation. The large expenditure on major and medium irrigation does not reflect the resource outline of irrigation planning in Andhra Pradesh.

Among the three regions of Andhra Pradesh State namely Coastal Andhra, Telengana and Rayalaseema, the Telangana region recorded the highest growth rate in terms of net and gross irrigated area. This region's growth rate is higher than that of...
unstable and backward agriculture in the region. Understandably, the Rayalaseema region has the lowest irrigated area to net sown area.

The Rayalaseema region lies in the rain-shadow region. The south-west and north-east monsoons do not confer significant rainfall on the region. All the districts in the region are nearly alike, in the range of their annual rainfall fluctuations. Anantapur district is the worst hit. The high level of dispersion of Anantapur's low level of rainfall, compounds its problems.

The Rayalaseema region represents disturbed natural endowments compared to Coastal Andhra and Telangana regions. The region has less than its proportionate share of wells. The annual addition to wells are not very significant. Chittoor district leads in the well construction among the four districts of the region. It presents a stable annual increase. The range of fluctuations in wells is quite wide in Anantapur district. Neither the range of fluctuation nor intensity in annual variation are new to the district. Anantapur district is noted for this and it is also its problem as well as its potential. In respect of tanks too, Rayalaseema region has less than proportionate share in Andhra Pradesh. Additions to tanks in the Rayalaseema region are largely due to the contribution of Chittoor district.

The gross irrigated area per well declined both in Andhra Pradesh and Rayalaseema region. The average area under a well in the district of Chittoor shows narrower fluctuations
than in the other three districts in the region. The stability of well irrigation in Chittoor district remained unmatched. The other three districts of Rayalaseema irrigate more area, per well than either Chittoor district, Rayalaseema region or the State as a whole.

One witnesses a decline in tank irrigation, in the Rayalaseema region. More than half of the irrigated area under tanks in Rayalaseema is in Chittoor district. Even in Chittoor the decline of tank irrigation is not difficult to notice. Anantapur district occupies second place in the region in tank irrigation next to Chittoor. However, the lowest size of tank irrigation in Kurnool is higher than the level of Anantapur, and Cuddapah. Further, the range of fluctuation in Kurnool is much smaller compared to other Rayalaseema districts. In Anantapur district wide fluctuations are noticed in gross irrigated area also.

Rayalaseema's canal irrigation is largely dependent on canal irrigation of Kurnool district. Anantapur's canal irrigation is greater than the canal irrigation of Cuddapah and Chittoor put together.

Nearly 25 per cent of the area irrigated from 'other sources' in Andhra Pradesh is from Rayalaseema region. Among the four Rayalaseema districts, Anantapur and Cuddapah together account for nearly two-thirds of the Rayalaseema's share. Chittoor seems to be losing these sources more than Kurnool.
Tank irrigation is a traditional practice in India. Tanks performed protective role and acted as "Pockets of insurance" to crops.

Tank system is economically productive and profitable. This system of irrigation depends upon local initiative and leadership. However, the growth of tank irrigation has been far from satisfactory. The decrease of tank irrigation is largely due to the abolition of ownership rights over private tanks. Moreover, plans and policy makers provided half hearted support to this system. All led to neglect of tank irrigation. In Anantapur district the decline in tank irrigation is unarrested unless interrupted by nature. We can not remain indifferent to the fluctuating and declining tank irrigation in the Rayalaseema region in general and the Anantapur district in particular. The degeneration of tank irrigation is disastrous for the drought-prone economy of Anantapur district. Whatever may be its relative efficiency, it contributes even in the worst of drought years, about 10 per cent to the gross irrigated area with negligible cost of maintenance. Hence adhoc and half-hearted support to tanks is not justifiable. Moreover, local initiative and management have been inadequate. There is a necessity to stimulate local initiative and management. There are tanks of all sizes spread all over Anantapur district. Infact every village discovered and husbanded the water source. No water source is too small to be ignored and allowed to be dried up.
unmistakably points to tank neglect. Had the tanks been maintained properly through annual desilting, water spread area could have been controlled and regulated.

The relationship between water spread area and culturable command area is not amenable for one sided unidirectional evaluation. This is because the benefits of water storage area not restricted to mere irrigation. The aspects of percolation and ecological conservation are not a small measure of benefits.

Each mandal in Anantapur district has varied surface flow sources. The wide variety in the number of these sources are true to the nature of the district. Some of these sources have potential for revival. The capacity of the neglected sources of irrigation could provide a basis for the formulation of a water resource plan at the micro level. In Anantapur district such a plan would be more economical and operationally viable.

The Bukkapatnam tank one of the biggest tanks even in the State of Andhra Pradesh, appears to provide a variety of hypothesis for further investigation and research. If we survey the size of the land holding sizes under the tank we can not fail to notice the fact that the most Ayacutdars are small size landholders and more over the large percentage of these holdings are getting further subdivided. This is a fact regardless of policy makers view about it. Had it not been for a near free provision of irrigation facilities these small, perhaps too small farmers for economists and social scientists tolerance would have been compelled to seek self-displacement.
Further, even when tank gets dried up, these small, far too small farmers can sink a well or share sinking of well with a fraction of the cost, than it would entail in another areas. To put the same argument in other words the marginal effect of closing down a tank either through the steady neglect or any other policy would be most severe on small farmers than on others. It virtually displaces them. If the construction of large irrigation projects displaces, a vast section of poor people and tribals, the closing of a tank does the same to those who were benefiting by a previous investment with no current costs.

The Bukkapatnam tank plays a vital role in sustaining the economic life of the people in about ten villages where, around one third of the total population are ayacutdar and the others are connected with those ayacutdars in one fashion or another. This involves no use of current resources except continuing husbandry of rain water where it rains.

Further, even the worst of year like 1973-74, for instance, when the tank gets dry as dust it enabled sinking of nearly 400 wells all along command areas as well as the hinter land thus mitigating and diminishing the consequences of near famine situation. It does not require much of hydrological authority and knowledge to relate that the extent of success in well digging was mainly due to the underground deposits protected by Bukkapatnam tank.

A word may be added in defence of the small farmers. The inherent capacities that go with small sizes and which do
not go with large sizes in this crop diversity on a small plot is an entirely different economic preposition as compared with large scale farming. Just as enlarging a bad picture enlarges defects of the picture and thus makes it more unpresentable, large scale diversified farming adds to costs more than proportionately. Reducing the size on the contrary tends to diminish costs more than proportionately. Thus there is a case to make as a policy for encouraging small farmers rather than defending their continuous existence. Would be far fetched if we say tank irrigation has conserved this very necessary economic feature.

The Bukkapatnam tank dramatises the integrated view of the conjunctive use of water even before the Irrigation Commission (1972) Popularised this idea. The modest estimates about this ayacut area of tank fixed earlier, accommodates this idea that every tank has a long term ecological responsibilities in conserving the percolation channels designed in nature earlier. What we are trying to suggest is that one should revisit the tank not only as a source of irrigation but as time gifted endowment meeting the needs of the village economy unless this kind of contour perceptions become a habit of thought with not only the planners at Delhi but also gross roots level executives in the villages. A proper appreciation of the role of the tank in a village economy besides restoring and reaffirming tank as one of valuable sources of irrigation.
A tank also needs to be contrasted with the present day irrigation tanks - large or small. In to the investment on the tank was built the basic idea of minimum carrying and maintenance costs, not only almost nil but amenable for postponement through time; not so in the case with big irrigation projects. The tank is therefore is a free asset and is almost a gift with no carrying costs whatsoever. Apart from ingratitude, it would be bad economics to neglect them.