Chapter - First

Introduction
Chapter One

INTRODUCTION

Planning is essential for the development of the country. It is an important tool to solve the economical and social problems in a proper way. Due to this aspect 20th century is known as 'the Century of Planning'. India, an undeveloped society and a country embedded with various problems of underdevelopment on one side and unique formation of prospective country as well as having the idea of a progressive society very vast in size on other side is the scenario of our country. Therefore it is an essential task of the Government to do time-bond development and to modernize the society without disturbing the unity of the country. After the independence of India, to achieve the aim of socio-economic development, as well as to complete the concept of Welfare State, the concept of Planned economy was motivated. Planning Commission was no included in the constitution. But socio-economic planning is mentioned in the 20th part of the Concurrent List. so that centre and State both can make the laws and programmes for the development of society.

The Directive Principles of State is expected to try for the welfare of helpless person and for the social welfare.\(^1\) Considering this fact, Dr. Babasaheb Ambedkar, chairman of the Drafting Committee, wrote to Dr. Rajendra Prasad, chairman of the Constituent Assembly, to involve a subject named 'Production Planning' in the constitution to give constitutional authority to the Planning Commission but it was not taken seriously.\(^2\) In 1976 became the 42nd constitutional amendment in the preamble of constitution and included 'Socialism' and a Endeavour was done to expend the role of the Government in the development.\(^3\) By recognizing the significance of planning for this, it is accepted the way of
democracy on the Government and India initiated the policy of Five Year Planning for agricultural development.

Agriculture is the backbone of Indian economy and unique occupation of people. since independence of India effort has been started for the development of agriculture and industries. The agriculture could not be ignored because of the priority of food grains required for a large number of population for living. Food is the basic need of the country to be provided by merely agriculture and to enrich the country on the whole. Presently 65% of Indian people are totally depended upon agriculture. Thus, agriculture has obtained much importance to provide employment to large number of people, to supply of raw material for the industrial development and for international trade. Mahatma Jyotiba Phule was such a revolutionary thinker who used to speak openly on the issues of farmers. His thoughts on Indian farmer and agriculture are reflected, he rationalized causes behind the bad condition of agriculture and suggested remedies for the agricultural reforms. Manvendranath Roy considered land owners and money – lenders responsible for the backwardness of agriculture and he suggested to use modern techniques instead of traditional techniques for the increase in the production. Dr. Babasaheb Ambedkar said, "Agriculture is a great national enterprise but agricultural land is small and scattered. The remedy on this problem is acceptance of integrated farming as that of Russia. By the acceptance of integrated farming, productivity and working capacity will remain permanent and a change can be done in the rural economy. There will be no social injustice in the integrated farming. Land development Banks, credit policy for farmers and marketing board should be established for the progress in the agricultural."

Indian agriculture is depended upon the monsoon. The farmers use the traditional system for field, therefore they can't produce more
agricultural production. This affects agricultural income. Since ancient period we have reference of irrigation system in India. If there is no sufficient supply of water to agriculture, there is no use of fertilizers and improved seed and pesticides, which damage the soil fertility. Therefore the Indian Government Planning Commission has been taken more efforts to increase the irrigation projects. Chhatrapati Shahu Maharaj built the "Radhanagari"\textsuperscript{10} dam and declared 'Mass irrigation policy' in 1902, and established the irrigation department and appointed the irrigation officer for proper development of irrigation.\textsuperscript{11} After the independence of India "Bhakra-nangal" dam was built. Prime minister Pandit Nehru inaugurated the dam and said that it is our 'Modern Temple'.\textsuperscript{12} After that some small and large dams were built in India in different States, for development of agriculture and industries but unfortunately not succeeded in the development of economy through the agriculture because of the unawareness of the farmers about the proper utilization of irrigation and administrative lacuna.

1.1. Concept of Planning

Plan is a body of economic and social policies expressed the qualified targets and defined tasks for the achievement of economic progress and improvement of their standards of living. Dimock defines Planning as\textsuperscript{13} "the use of rational design as contrasted with chance, the reaching of a decision before a line of action is taken instead of improving after the action has started". Seckler – Hudson succinctly defines it as\textsuperscript{14} "the process of devising a basis for a course of future action." In words of Millett,\textsuperscript{15}\"Planning is the devising the means calculated to achieve them.\"
A plan is a political statement, a technical document, enshrining the policies and programme of government. A plan is a charter of the progress of the people who refuse to be overwhelmed by vast variety of their problems and courageously struggling to overcome them.\textsuperscript{16} Plan contains activities and properties. An Indian plan is a product of a given socio-political situation and can be successfully implanted by the help of public spirit, honesty competence.\textsuperscript{17} A Plan is an orderly arrangement of the future for a country's resolve, determination to rise and to obtain its goals.\textsuperscript{18}

Planning is a process with its associated techniques, for securing continuity in time and internal consistency in the governmental policies operating in that field implying a general objective.\textsuperscript{19}

Planning includes the definition of the objective formulation of policies, its governing with minimum waste of the energies, giving initial direction to execution. The planning of administration establishes a frame within which management plans. Administration does not concern itself with details of operations; on the other hand management accepts administrations frame of objectives and basic facilities.\textsuperscript{20}

The control function of administration and leadership are what to plan for, how to plan and how to carry out it. A five year plan, for many underdeveloped countries, has become very useful to determine their long range objectives and agree upon certain objectives and certain priorities as per the demand of the various sectors of the economy.

A) **Role of Planning Commission in India.**

After the independence of India the Executive officers and the agricultural land went in Pakistan. The situation of food grain or industries were not better. Poverty, unemployment, illiteracy, etc. were the big problems. Besides of traditionalism, castism and untouchability
were present in the society. The condition of education and social health was not favorable. In short, only few people were having rich and luxurious life, and a big part of the society was poor, illiterate, and far from basic needs.

Dr. Babasaheb Ambedkar and his associates, formed constitution considering the idea, thought and principle of a welfare state. In the constitution provision has given to finish the economical, social and political inequality considering the target of mixed economy and started to develop mentality of society. 21 Time bound development and modernization were the main and necessary works before nation, for this need, Indian Government accepted the importance of Planning, and started the Five Years Plan from 15 March 1950. 22

1.2. Agriculture

Agriculture is much important for the economical development of a country, rich or poor as providing the basic needs of mankind and also raw materials for industry which after finishing serves as basic necessities for human race. For instance, textile, leather goods, brew and tobacco, therefore agricultural development affect the industrial development. In addition agricultural production must be in surplus and finance the import of capital goods certain kinds of industrial raw materials. 23

However agriculture is also a supplier of production factors such as capital and labour. Importance of agriculture was recognized by the classical writers. Adam Smith in his basic growth model says, 'food is the conditional factor, improvement in agriculture is the pivotal point for sparking off development in other sectors of the economy'. 24
Agricultural sector plays a strategic role in the process of economic development of a country. Since more than 65 per cent people are engaged in agriculture sector. The agriculture share in Indian economy before independent was 50 % and how it is 20%. Agriculture plays dominant role in Indian economy nearly 36-38 % of the national income.

Indian agriculture has been facing severe challenges, since one and a half decade. The problems before Indian agriculture are large diversity of crops, uncertain water supply, predominant tiny farmers, little commercial farming, existence of surplus labour, low level of technology, storage, roads and transportation, level of education, and property rights. There is widespread rural distress leading to a large number of suicides by the farmers in some part of the country.

Though Agriculture is a State subject, the budgetary support for Agriculture and Cooperation in the Centre Sector Plan has been increased by 9.7 per cent over budget estimate of previous year. The increase in case of Agriculture Research and Education is slightly higher at 13.3 per cent. The allocation for Irrigation under AIBP has been enhanced by 40 per cent.

The agriculture sector contributes at the rate of 24.2 per cent (Triennium ending 2001-02) to the India GDP and provides livelihood to 69 per cent of its population. As per third advance estimate, food grains production during 2002-03 is estimated to be around 184.1 million tones, oilseeds production 15.6 million tones, sugarcane 279.3 million tones (cane), and cotton 15.6 million bales (170kg each). Achievement of horticulture (fruits) was 45.50 million tones, whereas production of vegetables was 90.83 million tones in 1999-2000. Horticulture covers products like floriculture, coconut, cashew nut, mushroom, medicinal and aromatic plants in addition to fruits and vegetables.
In the Tenth plan the focus would be on sustainable management of natural resources like water and land. Proper emphasis will be given for development of rural infrastructure to support agriculture. Emphasis will be given on dissemination of agriculture technologies. Credit flow to agriculture sector will be stepped up. Agriculture marketing reforms will be taken up to enhance the share of farmer in the determination of ultimate price of agriculture produce.\textsuperscript{31}

The plan outlay of the ministry of Agriculture has been stepped up considerable since 2004-05. The outlay of the Ministry of Agriculture for the Annul plan 2002-03 and 2003-04 were relatively low at Rs. 3242 crore in each year, against which the actual expenditures were still lower at Rs. 2536.95 crore and Rs.3068.67 crore respectively.\textsuperscript{32} The Budget Estimates for the ministry of Agriculture for 2004-05 was Rs. 4150 crore which has further been steeped up to Rs. 5998.40 crore in 2005-06.\textsuperscript{33}

Progress in implementation of agriculture development plans included substantial increase in outlay for the ministry of agriculture since the annual plan 2004-05. The outlay of Rs. 6900 crore for 2006-07 for the Ministry of Agriculture is more than double the outlay of the Ministry Rs. 3242 crore in 2003-04.\textsuperscript{34}

A) Climate.

Climate plays an important role in affecting the characteristics of agricultural economy of a country. The climate of India may be broadly described as tropical monsoon type. There are four seasons: Winter,\textsuperscript{35} Hot weather summer,\textsuperscript{36} Rainy south-western monsoon and Post-monsoon, also known as north-east monsoon in the southern Peninsula.\textsuperscript{37} India’s climate is affected by two seasonal winds—the north east monsoon and the south–west monsoon.\textsuperscript{38}
The climate of Maharashtra is typically monsoonal in character with four months or rainy season followed by eight months of relatively dry period of winter and summer. The annual climatic cycle consists of four well marked seasons, namely the cold season, hot season, southwest monsoon and post monsoon season.

B) Population.

The population of India, in the twentieth century was around 238.4 million, increased to reach 1,027 million at the down of the twenty-first century. The population of Maharashtra as per 2001 Census was 9.69 crore.

C) Population Growth and Food Grain Requirement.

The National Commission for Integrated Water Resources Development [NCIWRD] has adopted figures of 1581 million and 1346 million as the high and low projection of population by the year 2050 where it is assumed will get stabilized. In their estimate urban population in the year 2050 is likely between 646 million and 971 million. The total food requirement for the country has been estimated as 449 million tonne [high demand scenario] and 382 million tonne [low demand scenario]. Feed requirement, losses in storage and transportation, seed requirement and carry over for years of monsoon failure have been estimated at 12.5% of food grain production. Thus the food grain production is required to be double to about 420 million tonne from the present level near about 210 million tonne to meet the projected requirement. Thus on an average, food grain production needs to be enhanced by around 5 million tonne per year.
D) Problems of Agriculture Development.

In Indian economy agriculture occupies central place it's development directly affect the economy. But the agricultural sector is growing at a very low rate. It is far from the growth and requirement of the economy. Through India is a agrarian country, agriculture is a predominant occupation it cannot meet even its own requirements. New from techno logiest are also not much effective in growing this production Indian agriculture is facing this pitiable condition because of some major problems.

The problems before Indian agriculture are, lager Diversity of crops, uncertain water supply, predominant of tiny farmers, little commercial farming, existence of surplus labour, low level of technology, storage, roads and transportation, level of education, and property rights.\[43\]

At last, because of above problems Indian agriculture is not doing well. But efforts are made to overcome them. Since last two debacles a vast change in economic and social infrastructure has been created to shape the Indian agriculture. The problems are old for centuries so they need a long time to set right. The government is stepping towards solving it.

In the Tenth plan the focus would be on sustainable management of natural resources like water and land. Emphasis is on dissemination of agriculture technologies and becoming agriculture marketing reforms\[44\]

1.3. Irrigation

Water is the basic input for agricultural operations. The crop cycle depends upon weather cycle of rainfall along with that of temperature in different parts of the country. Though, the crop production in India is
primarily rain dependent in terms of its acreage, the main production supply is from the irrigated areas. The irrigation is the single largest consecutive user of water attributing to 80% of total water utilized. Out of 140 million hectare net sown area and 190 million hectare gross cropped area nearly 40% is under irrigation which includes both assured as well as protective irrigation. Half of this is from ground water resources.

Agriculture has held a dominant position in the country’s economy. But this major occupation is rendered hazardous by scanty rainfall in large areas and by erratic monsoon elsewhere. Partial failure or even delayed arrival of the monsoon can cause extensive damage to crops. Conscious efforts are, therefore, being made continuously to supplement rainfall and to mitigate the grave consequences of a dry spell by supplying water artificially to parched lands. Irrigation implies maintaining the storage of water in the soil required for plant growth at times and places of deficient water supply. The agricultural aspect refers to the use of irrigation water and various agricultural practices and cropping patterns, methods of application and the quantity of water for single irrigation. The socio-economic aspect refers to the satisfaction for any community enterprise.

On the irrigation side the potential created in major, medium and minor irrigation schemes increased from 22.6 million hectares (m.ha.) in 1950-51 to 26.26 million hectares at the end of the first plan, 29.08 million hectares by the end of second plan, 33.57 million hectares at the end of third plan and 37.1 million hectares by 1966-69. At the end of 1974, the potential created was 44.20 million hectares, by 1979-80 it touched 56.61 million hectares and by 1985 it reached 65.22 million hectares. The potential created and utilized by the end of the Eighth plan, i.e., 1996-97 was 86.26 m.ha. and 77.24 m.ha., respectively.
potential created and utilized by the end of the Ninth Plan was 93.98 m.ha., and 80.80 m.ha. respectively. During the Tenth Plan additional potential of 11.75 m.ha is targeted to be created, i.e., 6m.ha. from major and medium irrigation and 5.75 m.ha from minor irrigation based on Ninth Plan investment and achievement levels.48

The 10th plan period, a total of 368 major and 1087 medium projects were taken up, out of which , it is anticipated that cumulatively 202 major and 865 medium projects are likely to be completed upto end of 10th plan. In addition, 215 ERM projects have also been taken up so far, of which , cumulatively 126 projects are likely to be completed by the end of 10th plan.49 The planning commission issued investment clearance for 18 major and medium irrigation projects in Annual plan 2006-07. Under Accelerated Irrigation Benefit programme , an allocation of Rs. 7121.00 crore has been provided in 2006-07 against Rs. 4800.00 crore in 2005-06.50

In India, the area under irrigation compared to the cultivated area, is only 40% , in Maharashtra this proportion is only 18.2%. One third part of the state is draught prone area. In the some part of the state irrigation is on a great scale due to the favorable natural condition. So that regional imbalance is created about the irrigation. This is an approximation that after creating ultimate irrigation potential about 36.6 % region out of total region under cultivation can be brought under irrigation. Maharashtra agri is depend on monsoon.51 In the Five Year plans, Maharashtra has given first preference to this sector , and the largest part of the resources is made available for irrigation sector.

Under development sector of irrigation, Major, Medium, and Minor irrigation, benefited area development and flood control are the main programme. In the beginning of the ninth Plan, through surface irrigation programme 32.21 lakh hectare irrigation potential has been
Chapter - Three

Agriculture Policy and Development

(Place of Maharashtra in Indian Agricultural Development)
created. Major irrigation programme require more time period for completion. The demand of bringing maximum land under irrigation is increasing, the minor irrigation project are given more importance because comparatively these programme require less time. In the end of ninth five year plan 38.12 lakh hectare irrigation potential has been created.

In January 1996, state Government established Maharashtra Krishna valley development corporation, simultaneously, for the rapid development of irrigation projects in Vidarbha, Konkan and Nashik, Dule, Jalgaon districts and Marathwada region. Government of Maharashtra has established Vidarbha, Konkan, Tapi and Godavari, irrigation development corporation by raising fund through debenture and for its distribution under the criterions made by honorable Governor, a special vehicle purpose company (SPV) i.e. Maharashtra irrigation financial company is established.

Maharashtra net sown area is around 17,732,000 hectares of which only 14.5 per cent is irrigated, of which more than half that is 55 per cent, is by wells. That renders agriculture vulnerable to droughts, a fact borne out by the periodic fluctuations only about 90% of the State’s food grain requirements. The gross irrigation area in 2001-02 was 36.67 lakh hectares.\textsuperscript{52}

A) River Systems.

Rivers by providing the much needed water to the agricultural sector play an important role in the rapid development of this sector. The river in India may be classified as-\textsuperscript{53}

[1] Himalayan rivers
[2] Peninsular rivers;
Coastal rivers; and
Rivers of the inland drainage basin.

The rivers which take off from the Himalayas are generally snow-fed and therefore yearly. The Daccan rivers are generally rain-fed and, therefore, fluctuate in volume. The coastal streams, specially of the west coast, are short in length and have limited catchments areas. The rivers of the inland drainage basin of western Rajasthan are few and far between. The Luni is the only river of this category that drains into the Ran of cutch.

Agricultural prosperity is greatly dependent upon the Himalayan rivers. It is through the canal systems, originating from these rivers that agricultural development has been brought about in other areas. Most of the surplus water of the rain-fed rivers is wasted as there are no means to store that surplus water and use it in the lean periods. Agricultural environment is, therefore, greatly influenced by natural endowment bearing upon the sources of water and its use.\textsuperscript{54}

The Godavari in the southern peninsula has the second largest river basin covering 10\% of the area of India. Two other river systems, which are small but agriculturally important, are those of the Tapi in the north and the Pennar in the south. These waistcoats rivers are of great impertinence as they contain as much as 11\% of the country's water resources while watering about 10\% of the land area.\textsuperscript{55}

The drainage system of Maharashtra consists of both west flowing rivers draining to the Arabian sea and east-flowing ones draining to the Bay of Bengal. The Godavari, the Krishna and the Tapi are the three major river basins of the plateau region. The first two viz. Godavari and Krishna are east-flowing which drain to the Bay of Bengal after traversing Andhra Pradesh and Karnataka, Tapi, though it is the river of the plateau, it is east-flowing and joins the Arabian sea. The other major
rivers of the plateau are Bhima, Manjra, Wainganga, Wardha, Prannita, Painganga, Koyna, Varna and panchganga.\textsuperscript{56}

Konkan rivers present quite a contrast to plateau rivers. They are short, varying in length from 50 to 150 km. They have a steep gradient and are fast flowing. The vaitarna, the Ulhas, the savitri and the vasishti are the important rivers of Konkan. They develop wide and shallow expanses and their mouths are often marked by sand bars because of the action of sea waves.\textsuperscript{57}

B) Need of Irrigation.

Extensive areas in Indian receive low and erratic rainfall. In different parts of the country in not and sub-arid areas our crop experiencing frequent as failure. In the country all about 128 districts have a low to medium rainfall under 1,125 mm annually and have little irrigation facility, agricultural development in India is depended heavily on irrigation.

However, water for irrigation available in India is in very short supply. In 1987-88, 63.3 million hectares of crop land, about only 35 per cent of total crop land were irrigation.\textsuperscript{58}

The necessity of irrigation arises because of gamble in monsoon, problem of increasing production, introduction of new agricultural strategy water requirement by different crops, and cropping pattern, lack of moisture in the soils, wide disparity in water flow of river. By irrigation there is a large scope exists in the development of under ground water which is available in India in vast portion. Irrigation can control differential productivity food crops from zone to zone and state to state. In good rainfall areas irrigation is required mostly as a supplemental need to protect their single crop agricultural against occasional draught.
Therefore irrigation is very essential to banish famines as a result of drought condition.

This is noticeable that irrigation will result best only after suitable changes like cropping pattern, improved fertility of land, use of improved varieties of crops, use of chemical fertilizers, green manures, use of plant protection measures and improved cultural practices. All this will happen only after adequate supply of water. 59

C) Vital Role of Irrigation.

Irrigation has proved beneficial to the country. In fact is forms the datum line for sustained successful agriculture. It alleviates suffering preserves life, averts famines and advances the material prosperity of the country. In fact, as pointed out by Sir Charles Trevelyan. “Irrigation is every thing in India. Water is more valuable than land because when water is applied to land it increases its productiveness and renders great extents of land productive, which otherwise would produce nothing or next to nothing.” 60 Dr. Knowles writes. 61 “the irrigation works have made security of life, they have increased the yields and the value of the land and the revenue derived from it. They have lessened the cost of famine relief and have helped to civilize the while region. In addition, they yield handsome profits to the governments.”

Dr. Gadgil’s survey of the economic effects of the Godavari and Pravara canals and indirect effects of the irrigation projects were very favorable. Due to irrigation, farmers could make additional investments in cattle, farm implements and on more valuable crops like sugarcane and the total employment of the farmers and the total employment of the farmers and laborers was greater. 62
D) **Benefits of Irrigation.**

From the studies undertaken in 1958 and 1961 in eleven projects from each of the regions it is seen that canal irrigation promoted greater utilization of land, enlarging. The average size of the farm, generated demand for additional farm labor, shifted in new and better varieties in crops, increased additional productive investment in farm business, favorable input-output ratio, and increased land revenue. And it also benefited in secondary and tertiary activities resulting in greater work opportunities and more employment to both family and hired labor higher value of output per industrial unit, and higher turnover of business.

The purpose of irrigation is to increase agricultural production, which is done in two aspects. The first is a protective, making up the moisture deficiency in soils during the cropping season. The second one is additional land use aspect to enable a second or third crop being raised on the lands provided with irrigation. Protective aspect is helpful to stabilize agricultural production against droughts, while second is helpful to overcome low productivity due to dryness or excessive water supply.

In India irrigation development was used as a measure of drought relief famines fathered this idea. Irrigation work was mostly on a defensive pattern but now as the population is increasing rapidly irrigation has a new purpose i.e. increased agricultural production.

The irrigated area produce 60 to 100% more than other areas. Irrigation by the use of manure in a suitable form leads to increase the fertility of land.

**1.4. Need for Research**

Agriculture plays an important role in the development of India. So that for the development of agriculture, Planning Commission has to make efforts consciously. Growth in the irrigation is an important factor
for the rapid development of agriculture. Therefore Planning Commission is paying attention towards agricultural as well as irrigation development. What does Indian Government do for the agricultural development? Which plans are made by the planning commission for it? How much importance is given to the agriculture factor in planning commission? Is really the development has been done by the strategy of planning commission? How much expenditure is done by planning commission and on which departments in agricultural factor? Is planning commission really successful in making reforms in agriculture? Which efforts are done for the irrigation? Are these efforts successful?

The strategy of Government for agricultural development is continuously changing, why does it happen? What is the share of administrative machinery in agricultural development? Does the administration do its work in proper manner? To know answers of all these questions, it is essential to do research on the topic. Nobody has done research on the topic in the Public Administration. The study will be useful for agro-economic Planning in future.

1.5 Review of Literature

A) Chauhan. (1971)⁶⁶ has attempted to classify some relevant situations relating to farm credit based on two field enquiries conducted in the same area (Bichpuri Block of Agra District) during late-sixties and at the beginning of the seventies. He found that the extent of institutionalized credit has increased from about 41 per cent to 63 per cent. This was observed for population covered. For the whole population the extent of institutionalized credit was hardly 25 per cent. Small farmers were neglected. Their problems remained unattended. It was found that the proportion of non-production credit went down significantly.
B) Niranj'an Pant.  

Faculty member, A. N. S. Institute, Patna, an author of book on irrigation administration- "A case study of Kosi Project", Published by Naya Prakashan, Kolkata, 1981, has thrown sufficient light on many aspects on the performance of Kosi Projects irrigation system that was created incurring heavy expenses but has not been truly successful on the performance front as per his opinion. This State of the affair, according to him, is due to the inadequate discharging capacity of the main canal as well as low efficiency in water utilization. The factors like silting, geological, technical as well as administrative also contribute to it considerably. Lack of coordination in implementing various schemes is also responsible for this. He finds that there is a lack of intradepartmental as well as interdepartmental coordination. Delegation of financial powers up to various levels is also one of the reasons for delayed implementation of the schemes. He advocates for running of canals during Kharif as a supplement to rain so that the system remains in readiness for Rabi season also. Further he suggests that the canals should not be closed in hot weather season when the water is free of silts.

C) Prof B. D. Dhavan.

An author of book, "Studies in Irrigation and Water Management" Published by common wealth publishers, 1989, new Delhi, explains that the multifarious wants satisfied by the water resources can be divided into two categories, viz: Consumptive use and non-consumptive use. In the first category i.e. consumptive use, water is literally consumed for eg usage of water for agriculture, industry and household purposes. The second category i.e. non-consumptive use, the resources remain unaffected for eg Hydropower generation, navigation, fisheries, recreation etc. He suggests that the goals of irrigation management should be based on following aspects:

1. Maximizing farm production along a stable growth path.
2. Realizing full utilization of created irrigation potential.
3. Minimizing over irrigation and ecological degradation.
4. Attaining cost effectiveness and reliability in irrigation service.
5. Achieving high water conveyance and storage efficiencies.
6. Promoting sustainable irrigated farming.

He also throws light on the problems of irrigation management in India. Few of them are summarized as below- 
1. Under utilization of irrigation capacity.
2. Inequality in irrigation.
3. Wastage of irrigation water.
4. Dependability of irrigation.
5. Financial losses.

He further states that the awareness about the goals as well as above problems needs wider propagation, both in the concept of endowment of natural resources and the socio-political imperatives of the country.

D) Prof Briz Kishor. 69 Jawaharlal Nehru Technological University, Hyderabad, (India), in his article, "Needs and modes of water resources education in India" in the same proceedings states that in the last few years new method for assessment of water resources have been developed and more sophisticated tools made available for studies on optimal use of water. Application of these specialized methods calls for a new made of education that is more specialized than what is normally offered in the conventional programs and requires special emphasis on emerging and need based areas. Hence, water resources education should strive to develop competence for assessment measurement processing calibration and analysis of hydrological data, besides attempting to promote
proficiently in the application of such information for the Planning and design of water resource project.

E) Giri R. A., Shastri V. K. and Somayajulu D. S. attempted to find out the contribution of land, irrigation and fertilizer to the growth of crop output for the period 1951-52 to 1962-63.

For the purpose of analysis, production function of cob-Douglas type has been fitted to (1) indices of the variables (2) the first differences of these indices (3) the productivity per unit of gross area as dependent variable and irrigated area and fertilizer used as independent variable. In addition, production function of linear multiple regression type has also been fitted.

The study showed that compound growth rate of crop output during 1951-52 to 1962-63 occurred at 3.5 per cent annum. The linear growth rate of crop output was estimated at 3.9 per cent per annum. Expansion of the area sown through extension of cultivation and intensive cropping contributed about three-fourth to four-fifth of the growth of crop output in India during the 1951-52 to 1962-63. The remaining part of this growth was contributed almost equally by increase in application of fertilizers and improved techniques. Study also showed that irrigation promotes expansion in crop area by enabling both extension of cultivation and multiple cropping and also makes application of fertilizers and improved cultivation practices possible.

F) Dey A. K. analyzed the growth rate trends for both total agricultural and food grains production for the period 1949-50 to 1973-74. Analysis was carried out with the index number series for agricultural and food grains production published by Ministry of food and Agriculture in Agricultural Situation in India for the 25 years 1949-50 to 1973-74 with the single base period, 1961-62. Two types of curves, viz., the exponential (semi-logarithms), and the gompertz fits were used for the
purpose of analysis. The study concluded that the common trend since 1950 was one, which could be interpreted as having a diminishing rate of growth or as having a constant rate of growth. The results showed that, for both agriculture and food grains production fits suggested declining rates of growth. Thus in both the cases the retardation hypothesis was found to have a considerable base of evidence in support of it. But it found difficult to accept the declining rate of growth in preference to the constant rate of growth. Thus on the basis of data extended up to the end of the fourth Plan. Dey's study supported the Rudra's noncommittal stand.

G) Joshi P.K. and T. Haque,\textsuperscript{72} examined inter-regional disparities in agricultural growth during the post-green revolution period. For the purpose of study, state-wise data of agricultural output and inputs for the years 1955-56 to 1975-76 were analyzed. The compound growth rates of agricultural output and input for the various states during the pre (1955-56 to 1965-66) and post-green (1966-67 to 1975-76) periods were calculated. In addition moving growth rates for every Five Years during 1966-67 to 1975-76 were also calculated.

The study showed that in the states like Assam, Himachal Pradesh, Karalla, Orissa and Uttar Pradesh, the growth rates of agricultural output were higher in the pre-green revolution period as compared to the post-green revolution period. Further study indicated that although the States of Punjab, Haryana, Andhra Pradesh, Bihar, showed high growth rates of agricultural output in the beginning years of green-revolution period i.e. 1966-67 to 1970-71, the over all growth rates in these states remained highly erratic over time. Also, the growth rates in these states for the last Five Year period from 1970-71 to 1975-76 were found to be relatively much lower than in the First Five year period i.e. 1966-67. In States like Assam, Karalla and Maharashtra, the output growth rates were lower in
the beginning years of green revolution period i.e. 1966-67 to 1970-71, but increased during the period 1971-72 to 1975-76. It was also seen that only eight out of sixteen States under study, witnessed relatively higher growth during 1971-72 to 1975-76 compared to 1966-67 to 1975-76. thus the study showed the large scale inter-regional disparity in the growth rates during the post-green revolution period.

The study also showed that different factors like fertilizer consumption and area under high-yielding varieties followed by technical change, irrigation, rainfall and credit were the most important in influencing the agriculture productivity in a majority of the Indian States. But the relative role of these factors, differed widely as between the States.

1.6. Research Methodology

A) The Title of the study.

"Role of Planning Commission in Agricultural Development"

(With special reference to Maharashtra)

B) Objective of the study.

The following are the main objectives of the study.

1. To understand the place, nature and importance of Agricultural development.
2. To analyze five year plan in India.
3. To study the role of planning commission in Agricultural development.
4. The study the problems of agricultural development.
5. To study the role of planning commission in the agricultural development in the Maharashtra State.
6. To know about the composition of planning commission and its working system method.
7. To study is importance given by planning commission to agriculture.

C) **Hypothesis of Study.**

The following hypotheses tested during the course of study-

1. In the light of organizational, composition, and working system method is not proper.

2. Strategy for agricultural development accepted by planning commission.

3. The problems occurred in implementation and strategies does not match.

4. The recommendation made by state planning commission are not being followed.

5. Growth rate of agricultural development is satisfied in Maharashtra.

6. Through Five Years Plan developed agriculture sector in Maharashtra.

D) **The Area of the study.**

Planning Commission in India and State Planning Commission in Maharashtra. (First Five Year Plan to Tenth Five Year Plan)

E) **The Nature of the study.**

The study will be descriptive and also evaluative in nature.

F) **Method and tools of data collection.**

a) Data has been collected from the primary sources, available in Government Institutions and other organizations.

b) Secondary data also has been collected from sources such as:

1) Five year Plans in India (1st to 10th Plan)


3) Annual Plans in Maharashtra (2001-02 to 2008-2009)
5) University Libraries.
6) Government Documentation and office records.
8) Reports, Books and Websites.

G) Chapter - Scheme.
1. Introduction.
2. Planning commission in India.
3. Agricultural Policy and Development.
   (Place of Maharashtra in Indian Agricultural Development)
4. Irrigation Policy and Development.
   (Place of Maharashtra in Indian Irrigation Development)
5. Conclusion and Suggestion.
References.


22. Late Dr. Mamoria C. M. and dr. Badri Bishal Tripathi (2003), Agricultural Problems of India, Kitab Mahal, Allahabad, P. No. 15.
34. Planning Commission, Annual Plan 2006-07, P. No.413.
38. Late Dr. Mamoria C. M. and dr. Badri Bishal Tripathi (2003), Agricultural Problems of India, Kitab Mahal, Allahabad, P. No. 12.
47. Planning Commission, Sixth Five Year Plan (1985-90), P. No. 561.
49. Planning Commission, Tenth Five Year Plan (2002-07), P. No. 324.
52. Planning Department (Government of Maharashtra), Annual Plan, 2007-08, Government Central Press, Mumbai, P. No. 4.
56. Dr. Mungekar Bhalchandra, (2003), The Economy of Maharashtra (changing structure & Emerging issues), Dr. Ambedkar institute of Social and Economic Change, Mumbai, P. No. 47.

57. Research, Reference and Training Division (AD), (2004), India-2004 (a reference annual), Ministry of Information and Broadcasting Government of Maharashtra, P. No. 534.


62. Late Dr. Mamoria C. M. and Dr. Badri Bishal Tripathi (2003), Agricultural Problems of India, Kitab Mahal, Allahabad, P. No. 151.


66. Chauhan, (1971), classify some relevant situations relating to farm credit based on two field enquiries conducted in the same area (Bichpuri Block of Agra District)

67. Pant Niranjan, (1981), irrigation Administration- "A case study of kosi Project", Published by Naya Prakashan, Kolkata..

69. Briz Kishor, Jawaharlal Nehru Technological University, Hyderabad, (India), in his article, "Needs and modes of water resources education in India"


71. Dey A. K, analyzed the growth rate trends for both total agricultural and food grains production for the period 1949-50 to 1973-74.

72. Joshi P.K. and T. Haque, examined inter-regional disparities in agricultural growth during the post-green revolution period.