ABSTRACT

Water undoubtedly is one of the basic necessities of human and animal lives on the earth. Agricultural development is also dependent upon the availability of water. Water relatively is a scarce resource in relation to the requirements and needs of the various nations. It is alarming to note that about 97 per cent of earth’s total water resources is found in the oceans and the rest 3 per cent is found on the ground. The surface water of dams, lakes, rivers and springs constitutes only a small fraction of earth’s water resources and this is available for drinking as well as irrigation purposes.

Sustainability and development of water resources has always been a critical problem as well as a challenging task for Government of India. Consequently, with the advent of economic planning, efficient management of water resources has attained great importance in India. Though economic planning has completed more than five decades yet supply of water in many rural as well as urban areas of the country is inadequate and erratic due to frequent power cuts and other management problems such as, absence of accountability and effective controls. There is also little freedom in
decision making to agencies such as Jal Nigams, Jal Sansthsans, Water Works Department, Irrigation Department etc. which are involved in providing water for drinking as well as for irrigation purposes to all towns and villages of the country. Moreover, these institutions also suffer from many implementation barriers due to excessive interference of bureaucrats and politicians. All this calls for advance planning for sustainability and development of water resources in the country. It is in this background, the present study entitled, “Sustainability and Development of Water Resources in U.P. with special reference to Bulandshahr District” has been carried out.

The entire study has been divided into six chapters. The first chapter highlights the concept of sustainable development of water resources in a general way. In order to understand the concept of water resources, it was felt worthwhile to throw some light on natural resources which include land resources, water resources, fisheries, mineral resources, forest resources, marine resources, climate, rainfall and topography. Metal, ores, coal, clays, stones, oil and gas are some non-renewable resources, while ground water is an example of renewable resources because a flow is available to replenish the stock of water. The countries which possess a sizable and diversified
natural resource endowment are in a better position to achieve a rapid economic growth. New technological devices have enabled us to mine the metal, or to explore the oil and gas or to use the ground and surface water for irrigation purpose at a faster rate.

It has been noted in this chapter, that water is a prime natural resource, a basic human need and a precious national asset. It is important to manage water resources judiciously with a view to eliminate the cycle of shortage (droughts) and excess (floods). It calls for a fresh look at the strategy adopted so far towards the flood control and drought management to ensure sustainability and development of water resources.

The second chapter entitled, “Survey of Literature” is a review of various researches conducted on different issues related to water resources. It has been concluded that of course many researches have been conducted in the field of water resources but so far no specific work has been done on the sustainability and development of water resources in Uttar Pradesh with special reference to Bulandhshar District. It is in this background the study undertaken by me on the theme of water resources will not be an addition to what has been attempted in various studies but will also
provide an opportunity for highlighting recent happenings in this particular field with special reference to a micro level study conducted in Bulandshahr district of Uttar Pradesh.

Third chapter aims at examining the sustainability and development of water resources in India, just as to prepare the background for the study of sustainability and development of water resources in Uttar Pradesh with special reference of Bulandshahar District. It has been observed that India is one of the wettest countries of the world but it is not able to hold all the water it receives. Because of deforestation and denudation, a large portion of the monsoon water disappears into sea as surface run-off. Community resources such as ponds, tanks and rivers are misused and continuously neglected. Rivers are increasingly getting polluted as urban and industrial water are dumped into them. The state governments who are the implementing agencies for water supply and sanitation programmes should pay attention to the organizational and administrative structures at various levels, in order to utilize the plan funds more efficiently and productively. The organizational pattern for execution of water supply and sanitation schemes varies not only between different states but also within the state itself in the case of many states.
After examining the sustainability and development of water resources in India, it had been of paramount importance to study the sustainability and development of water resources in Uttar Pradesh which is the main theme of the research project. Hence, the fourth chapter deals with the sustainability and development of water resources in Uttar Pradesh. It presents the true picture of the sustainable development of water resources in the State.

It has been observed that about 80% of the population of Uttar Pradesh lives in the rural areas. The state government is committed to provide drinking water and sanitation facilities in the rural and urban areas. State Government has laid the target of providing drinking water to the 100 per cent urban population. Although in urban areas the drinking water facility through pipelines is available in most of the towns, but the supply is not satisfactory. Still in many small towns the state water supply depends only on a single water tap which is often dry and this requires large scale repairs and maintenance of the existing water supply system. Due to phenomenal growth of urban population per head water supply has become inadequate. Works are being undertaken under the World Bank Plan for the
improvement / extension of the drinking water facilities in all big cities of the state. Improvement in the drinking water facility could not be done due to inadequate resources during first four five year plans. However, from fifth plan onwards massive expenditure has been incurred on the sustainability and development of water resources in UP. Despite that the state government did not meet the minimum requirements of water in big towns and consequently there is crisis of drinking water in many parts of the state.

Apart from this, while reviewing the schemes of Government of India and other national and international organization, it has been observed that (the Bulandshahr the district chosen for assessment of water resources in this present project) has been totally neglected. Not a single project has been so far launched in the district for the supply of drinking water, irrigation, drainage etc. Thus, is suggested that the planners must take immediate steps to minimize the disparities in the provision of social infrastructure in Bulandshahr district as compared to other neighbouring district.

The fifth chapter entitled, “Sustainability and Development of Water Resources in Bulandshahr District”, indicates that there are extreme variations in the provision of water facilities within the district itself. The
number of hand pumps and tube wells for urban as well as rural drinking water supply is not in proportion to population and villages. Irrigation facilities are also very limited rather declining every year. Consequently, in most cases, initiatives have been taken by the people themselves for the development of their own sources of water for drinking as well as for irrigation purposes which is evident from the fact that the number of private boring pump sets and private tube wells has increased in rural areas. Government supplies are available mainly in those areas which have strong political backing. The people of such areas have been benefited more as compared to other areas where the representative of public have taken no interest in their constituencies. Some remedial measures have been suggested in the last chapter for sustainable development of water resources in U.P. State in general and Bulandshahr district in particular. Since no human need could be more basic than the need of water, to sustain water, it is necessary that it is no longer considered a free resource. Water must be priced, but needs to priced differentially for different income groups in the society. Another significant fact relating to water is that India does not have the problem of quantity but very often of quality. Besides, the intensive researches by the scientists in this particular field, existing supplies should be used more efficiently and new supplies must be developed. Government
at all levels should re-evaluate legal, technical and economic approaches for sustainability and development of water resources in the light of possible climate changes. Hence, it is suggested that the concerted effort of government, non-government organizations, economists, scientists, social scientists, engineers, politicians, different supporting agencies and general public as a whole is the need of the hour for sustainability and development of water resources in Bulandshahr district.