

Management of Water for Sustainable Development

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ABSTRACT

Every nation on this planet earth depends fully on their natural resources for their social and economic growth and development Those nations who have plenty of such natural resources, their social and economical development is rapid and those who have limited natural resources their development seem to be slow. These natural resources includes land, forests, air, solar light, minerals and other sources of energy water is the most important resource among these.

KeyWords: Forests, Air, Minerals

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INTRODUCTION:

Every nation on this planet earth depends fully on their natural resources for their social and economic growth and development Those nations who have plenty of such natural resources, their social and economical development is rapid and those who have limited natural resources their development seem to be slow. These natural resources includes land, forests, air, solar light, minerals and other sources of energy water is the most important resource among these.

1. IMPORTANCE OF WATER :

Water is an invaluable resource which is known as vaari, jal, water, etc There is a proverb in Gujarati "pa'I Aneva'l ivcarInevapor" means water and speech showed be used economically which shows the importance of water the joining lint for the growth and development of this universe depends on the reasonable use of this resource. The fundamental necessity to sustain our own existence, more or less depends on water. For the existence of every living being on earth their growth and development, water is a must it is believed that the first evolution of living being on earth water played a major role and that is why rishis in Vedic age wrote to show the importance of water "Aapo vE jlvnm" The importance of water can be seen in Vedic anthem as "inkamen: pjRNyo v8R tu" by praying the God of rain to regular in all parts of Bharat Man can survive for a few days without food but without water his existence would be in danger we have about 70% water in our body. Hence, water is inevitable everywhere for living things on earth or industries.

2. SUPPLY IS LESS AND DEMAND IS MORE :

The main source of water is rain. The ratio of rain is different in almost all the parts of Gujarat. We can see and observe more rain fall in southern region of Gujarat and less can be seen in kachchh In Valsad 1794 mm rain fall was registered in 2012 while in Kachchh it was only 248 mm. The problem becomes more serious when rainfall is irregular and need of irrigation is more. Saurashtra, Kachchh and north Gujarat have less rain fall and their main occupation is agriculture and complementary to agriculture and rearing animals Like Cows, buffaloes ect. We don't have any river having water flow for a full year. Irrigation through canals is very less in Gujarat In 2009-10 the approximate share for irrigation by canals was 20.41 %.To cope up with the scarcity of cereals and other agriculture products new policy of Green Revolution was introduced in which the use of chemical fertilizers, insecticides, improved seeds was encouraged on the contrary the necessity of water grew more and more. In contrast with animal rearing and industries, agriculture need more water everywhere. That is why supply of water is less and the usage is more.

3. SCARCITY OF WATER IN SAURASHTRA :

It is believed that 91% of irrigation in saurashtra is done through bore wells, hence the level of underground water goes down. Through the schemes like Sujlam-Sufalam, Sardar Sarovar, Bhadar, Vartu-2, govt. tried to make supply of water and improvement can be seen in the circumstances of famine but control over scarcity of water cannot be made and permanent solution is yet to be made. In the long run it seems a severe water scarcity in this region.

Dr. G R Nambiar deeply studied about the water resource in 1975 and he warned if the balance between water and its usage is not maintained the ground water will dry out. Today the problem of water is debatable in Gujarat Govt. sanctioned Rs. 100 crore from the total budget.

Absence of planning in storage of water, distribution of water and regulation of water becomes the reason for water scarcity. Due to the groundwater level gone down, fluoride, and salt be seen more in water and diseases like kidney stone, joints and teeth problem among people spread rapidly.

Due to the ground water level gone down, enough water cannot be supplied hence production decreases.

Due to the ground water level gone down, level of salty water came up and the severe water crisis is seen.

Due to the development of industries, pollution of water increased. For ex. due to the sari industry in Jetpur, coloured water from borewell can be seen in many parts.

Due to the scarcity of water, the animal /herds rarer have to migrate and their economical condition worsened.

Water borne diseases can be seen due to industrialization, urbanization and population explosion due to the absence of pure water. For the development in the rural areas of Gujarat, a long term, sustainable economic planning and social development planning should be implemented. For economic growth, agricultural development should be given priority by irrigation and the criteria for the success of development, water management should be priority.

4. MAIN CRITERIA FOR SUSTAINABLE DEVELOPMENT :

A. Natural Resources should be Sustained :

Water is a precious gift of nature it can not be produced in laboratories. To quench the thirst of every living being on planet earth, the elixir of life should be preserved any how.

B. Can be given as a gift to our future generations :

It can be accepted that the natural resources on this earth are for all living being and its usage is for present and future generation its just distribution should be made it should be seen as a precious gift and future generation should also be benefited. The groundwater in some areas in saurashtra are emptied. This situation shows that we have bereaved the right of our future generation

C. Environment should be protected :

Vegetation purely depends on water, land and sunlight, due to the lack of water. Forestation can not be materialized. Due to the Global Warming sea level balance has been cost which adversely affect every living being on earth. Earthquake, tsunami, immense heat, immense cold, cloud burst like natural calamities are the consequences of violation of balance in the usage of natural resources.

D. For the well-being of human being :

Sustainable development is a process of economic activities in which the quality of environment should justly be maintained. That is why, in the concept of sustainable development, ethical order should conclude in pure and maximum benefit to our present and future generations, the condition is that the services we get through natural resources should be preserved quantitatively and qualitatively.

Water is a natural resource and should be used moderately by present generation economically for the solution of the problem of water, sustainable development, balance in environment and scientific economic usage of water, water management is a must. In this direction Govt. of Gujarat has tried by implementing many schemes like water grid, water shed management, Paani Vivek (water discipline) drip irrigation fountain system, recycling of water, Khet-Talavdi, Check Dam, Well-recharging, Sujalam-Sufalam etc. though the scarcity of water has not yet been solved. If the following schemes should be completed rapidly, the problem of scarcity of water should be decreased (i) Narmada Yojana (ii) Par -Narmada link Yojana (iii) Kalpsar Yojana (iv) Sauni Yojana

5. REMEDIES FOR SUSTAINABLE DEVELOPMENT :

1. Licence should be issued to those industries who introduces purification / recycling of water scheme for using water continuously
2. For the distribution of water of Dantiwacda Dharoi Dam, govt. has created cooperative societies. such societies should also be introduced throughout Gujarat.
3. We have enough quantity of water resource in Gujarat but the distribution of water is inappropriate. Equitable water management should be introduced and established
4. Govt. should take the help of NGOs self help groups of women under DRDA sakhis mandals in rural areas should be given subsidized projects for water conservation.
5. Dairy management mostly depends on water, for the conservation of water modern equipment should be utilized people should be encouraged to spread awareness for the conservation of water.
6. In agriculture, fountain system / irrigation, drip irrigation, green house, Net house systems be introduced not only by giving subsidies but awareness among people should also be introduced.
7. The approach for distribution of knowledge and information among farmer to farmer should be created.

Besides, for the sustainable water management conservation of water, economic use of water, efficient use of water, people awareness, co-operation, constitution for water, distribution of water, control over water, research, assessment / evaluation, management financial and technological support and to form different teams by international water management institute and Institute of Rural management, Anand for sustainable water management.

In short, God has given us the precious gifts of natural resources and it becomes our prime duty to conserve and enrich these natural resources.

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