

“Drought and It’s Effect on Human life”

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Abstract

Drought is a natural disaster as well as man-made disaster. precipitation variability is main Natural reason of Drought in India. Inappropriate use of water, we do not give the value to water, government ignore the importance of water, many farmers taking the crop like a sugarcane which is absorb lot of water, every year we get sufficient rainfall, but we don’t plan of the rain water. And these are the man-made reasons of drought.

Drought impacts health through many pathways. Water is life! People need water to drink, grow food, and be clean. But drought affects health in many other ways too. Drought affects our lives in many different ways because water is such an important part of so many of our activities. We need water to live, and animals and plants do too. We need water to grow the food we eat. We also use water for many different things in our lives, like washing dishes, cooking, bathing, and swimming or river rafting. Water is also used to help make the electricity we use to run the lights in our houses and the video games you may like to play. When we don’t have enough water for these activities because of a drought, many people and many different things will be affected in many ways.

Keywords: - Drought Causes, Types, effect, Human Life, Remedies, Environment, etc.

Introduction: -

Drought denotes the meteorological, agricultural, environmental, climatic, economic and political consequences of a gap between the water availability and demands for the needs of domestic, irrigational, industrial, commercial, and recreational consumption in an area over extended period of time. The hydrosphere is combined mass of water found on, under and over the surface is covered by water in the form of oceans, seas, bays, gulfs, lakes, rivers etc. the oceans contain most of the earth’s surface water. Most fresh water is frozen into glaciers. Most available fresh water is stored underground as groundwater.

- ❖ All water - (Ocean 97% and Fresh water 3%)
- ❖ Fresh Water - (Ice caps & glaciers 79%) (Groundwater 20%)
(Easily Accessible surface fresh water 1%)
- ❖ Easily accessible surface water - (Lakes 52%, water within living organisms 1%, Rivers 1% Atmospheric Water vapour 8%, Soil moisture 38%)
- ❖ Above information shows easily accessible surface water is only 1% of all water.

Drought is a complex, slow processes of ecological challenge that affects people than any other natural hazard by causing serious economic, social & environmental losses in both developing & developed countries. Drought period of unusual dryness is a normal feature of the climate & weather system in semi-arid and arid regions of the tropics, which covers more than one third of the land surface and is vulnerable to drought & desertification. In simple words drought is a prolonged period of abnormally low rainfall leading to a storage of water affecting badly growing and living conditions. The characteristics like rainfall pattern, living requirement, flexibility of usage in the water resources etc. are different for different regions. Due to varying characteristics and its varying impact for different regions around the world universally accepted definition of drought could be not concluded. Drought is a normal recurrent feature of Climate & occurs in all climatic regions and is usually characterized in terms of its spatial extension, intensity & duration. Drought is generally considered to be occurring when the principle

monsoon, i.e. southwest monsoon & north cost monsoon, fail or are deficient or scanty. Monsoon failure causing crop failure, drying up ecosystems & shortage of drinking water results in undue hardship to the rural & urban communities.

Objectives: -

- 1) To understand the types of Drought.
- 2) To understand the effect of Drought.

Database & Methodology: -

The research paper highlights on Drought and its impact on human life. This study based on secondary data. The necessary data has been collected from various sources like gazetteer of Maharashtra, agricultural office, V.N.M.K.V. Parbhani, agrovana newspaper, research article, website etc.

Types of Drought: -

1) Meteorological drought:

It is a situation when there is a significant decrease in rainfall from the normal over an area. This kind is usually determined by the general lack of moisture in the weather such as lack of precipitation, and the play of other weather conditions such as dry winds, high temperatures and so on. It is expressed in relation to the average conditions of the regions over a long period of time. It is usually an indicator of potential water crisis if the condition is prolonged. Meteorological drought can begin and end immediately.

2) Hydrological Drought:

- Hydrological drought refers to a persistently low discharge and/or volume of water in streams and reservoirs, lasting months or years. Hydrological drought is a natural phenomenon, but it may be exacerbated by human activities. Hydrological droughts are usually related to meteorological droughts, and their recurrence interval varies accordingly. Changes in land use and land degradation can affect the magnitude and frequency of hydrological droughts.

3) Agricultural Drought:

- Agricultural drought links various characteristics of meteorological drought to agricultural impacts, focusing on precipitation shortages, differences between actual and potential evapotranspiration, soil-water deficits, reduced groundwater or reservoir levels, and so on. Plant water demand depends on prevailing weather conditions, biological characteristics of the specific plant, its stage of growth, and the physical and biological properties of the soil. A good definition of agricultural drought should account for the susceptibility of crops during different stages of crop development. Deficient topsoil moisture at planting may hinder germination, leading to low plant populations per hectare and a reduction of yield.

4) Socioeconomic Drought:

- Socioeconomic definitions of drought associate the supply and demand of some economic good with elements of meteorological, hydrological, and agricultural drought. It differs from the other types of drought in that its occurrence depends on the processes of supply and demand. The supply of many economic goods, such as water, forage, food grains, fish, and hydroelectric power, depends on the weather. Due to the natural variability of climate, water supply is ample in some years, but insufficient to meet human and environmental needs in other years.

Socioeconomic drought occurs when the demand for an economic good exceeds the supply as a result of a weather-related shortfall in water supply. The drought may result in significantly reduced hydroelectric power production because power plants were dependent on streamflow rather than storage for power generation. Reducing hydroelectric power production may require the government to convert to more expensive petroleum alternatives, and to commit to stringent energy conservation measures to meet its power needs.

The demand for economic goods is increasing as a result of population growth and economic development. The supply may also increase because of improved production efficiency, technology, or the construction of reservoirs. When both supply and demand increase, the critical factor is their relative rate of change. Socioeconomic drought is promoted when the demand for water for economic activities far exceeds the supply.

Drought Effect on Human life:

Drought and Man

- People migrate to other places in search of better living conditions. . This makes a region in drought vulnerable, as many of its young and working population are forced leave. Farm families suffer more when family members migrate. Droughts in more rural areas of the world cause strain on family lives. There is more pressure on women to work outside to help provide for the family.
- Due to lack of food, malnourished children are born, so the incidence of child mortality increases
- Due to the drought, the temperature decreases with water shortage
- Due to the supply of water, the people in it have to suffer many diseases

Drought and Agri

- Reduced rainfall can limit the growing season for farmers, and further reduce crop yields by creating ideal conditions for insect infestations that damage crops. This can bring increases in food prices, or shortages of certain foods, potentially leading to malnutrition.
- Due to shortage of food grains in drought-prone areas, the increase in theft rate in society is increased.
- People in rural areas migrate to the city for employment, so that there is a big difference in the population and gender posthumous.
- Due to drought, there is a decrease in productivity and therefore the farmers are debt-free and there is a time to commit suicide
- In the case of drought, many children in the family are stuck in a marriage, so there is a sense of depression in the family
- Due to shortage of water, wild animals move from habitat to rural areas
- In the famine, farmers sell their land and the merchants buy at lower prices

Drought and industry

- Industry dependent on farming stops due to lack of goods
- Due to lack of supply and low demand, the prices of goods are reduced
- In drought conditions, food procurement has to be done outside the country

- During the famine, the economic development of the country is widespread
- Due to drought companies dependent on water fall off and many employees become unemployed.

Remedies: -

- Proper planning of available water
- Use drip irrigation for agriculture
- Remove sludge from dams and increase their depth
- Fodder camps should be set up for the farmers
- Arrangement of food and water in drought-prone areas
- Plants should be cultivated on a large scale
- Construction of small dams & other reservoirs to store & supply water to drought affected areas.

Conclusion:

Droughts are a natural disaster that nobody can stop from coming, but we can prepare for the effects of this natural disaster to make it less difficult. There are many human and natural system impacts that this force of nature costs that we should be aware of. There could be a drought happening at this very moment of time, or there could be one heading our way right now which is why awareness is important.

References :

- Appa Rao, G,(1981), 'Atmospheric Energetics Over India During Drought and Normal Monsoon', Mausam, Vol.32.
- Askew, A.J., Yeh, W.W.G. and Hall, W.A.(1971), 'A Comparative Study of Critical Drought Simulation', Water Resources Research, American Geophysical Union, Vol.9, pp.52-62.
- Central Water Commission(1982), 'Brochure on Drought', Government of India, New Delhi
- Chakraborty, A.K. and Roy, P.S.(1979), 'Influence of Droughts on Ecosystem as Observed from Landsat', Proc. of Symposium on Hydrological Aspects of Drought, IIT, Delhi, pp.47-66.
- Chakraborty, A.K. and Roy, P.S.(1979), 'Influence of Droughts on Ecosystem as Observed from Landsat', Proc. of Symposium on Hydrological Aspects of Drought, IIT, Delhi, pp.47-66.
- Final Report(1988) on 'Hydrological Aspects of Drought in 1985-86', National Institute of Hydrology, Roorkee, India.
- Gadgil and Yadamuni(1987), 'Rainfall in Karnataka-Variability and prediction', Environmental Report of Karnataka State in 1985-86, Bangalore
- Government of India(1973), 'Integrated Agricultural Development in Drought Prone Areas', Report of Task Force on Integrated Rural Development, Planning Commission, Government of India.
- Krishnan, A(1979), 'Definitions of Drought and Factors Relevant to Agricultural and Hydrological Droughts', Proc. of Symposium on Hydrological Aspects of Drought, IIT, Delhi, pp 67-101
- Malik, A.K. and Govindasamy, T.S.(1963), 'The Drought Problem of India in Relation to Agriculture', Annals of Arid Zone, Vol.1, pp. 106-113.
- Manual for Drought Prone Areas Programme and Desert Development Programme (1992), Ministry of Rural Development, Government of India.