



DROUGHT AND ITS PLANNING FOR DROUGHT - PRONE AREA: A GEOGRAPHICAL PERSPECTIVES

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ABSTRACT

Drought is the intrinsic component of the natural climate system. A drought is an extended period of months or years when a region notes a deficiency in its water supply. Generally, this occurs when a region receives consistently below average precipitation. However, the effects can also be worsened by man. It can have a substantial impact on the ecosystem and agriculture of the affected region. Therefore the present paper is an attempt to understand the drought and its impact and mitigation strategies in general.

Keywords: Drought, stages of droughts, drought mitigation,

When drought occurs there is an acute scarcity of water over the land surface. In extreme conditions the water-table is so-lowered that the wells/pumps sets are failed to discharge the water, as result not only the crops are suffered but the human being also face a crucial problem for drinking water.

The Irrigation Commission, 1972, observes “Assuming that districts which receive less than 75 cm. of rainfall per annum are liable to drought”.

Drought affected states of India

In India about 260 million hectars lands are subject to droughts of varying intensity. The severances’ of drought effects has been classified in different classes; the states falling in respective classes as under.

Table: Severness of drought and affected states in India

<i>Drought</i>	<i>Affected State</i>
Disastrous Severe	Western Rajasthan and small portion of Karnataka (Bellary) Karnataka, Tamil Nadu, large portion of U.P. & M.P. and small part of Maharashtra (North-Western part)
Large Moderate	U.P., Central M.P., Maharashtra, Punjab and Haryana Orissa, Bihar, W.B., half of M.P., Part of Maharashtra, A.P. and Tamil Nadu.

Source: Compiled from the book ‘Soil and Water conservation engineering’

For most regions, drought is a normal, recurrent feature of the climate, and having adequate drought mitigation strategies in place can greatly reduce the impact. Recurring or long-term drought can bring about desertification.

Consequences of Droughts

The periods of the droughts can have significant environmental, economic and social consequences.

The most common include consequences include:

- Shortage of water
- Death of livestock
- Reduced crop yields
- Desertification
- Soil erosion
- Dehydration and related diseases



- Lack of water for irrigation (Famine)
- Social unrest
- Migration of peoples
- Quarrels over water and foods among peoples

This effect varies according to vulnerability. For example, subsistence farmers are more likely to migrate during drought because they do not have alternative sources. Drought is rarely if ever the sole cause of famine. Drought can also reduce water quality, because lower water flows reduce dilution of pollutants and increase contamination of remaining water sources.

Stages of Drought

As a drought persists, the conditions surrounding it gradually worsen and its impact on the local population gradually increases. Droughts go through three stages before their ultimate cessation:

1. Meteorological drought is brought about when there is a prolonged period with less than average precipitation.
2. Agricultural droughts are that affect crop production or ecology of the range.
3. Traditional drought, it is caused by an extended period of below average precipitation.
4. Hydrological drought is brought about when the water reserves available in sources such as aquifers, lakes and reservoirs falls below the statistical average.

Drought Mitigation Strategies

- Drought Monitoring: Continuous observation of rainfall levels and comparison with current usage levels can help prevent man-made drought.
- Rainwater Harvesting: Collection and storage of rainwater from roofs or other suitable catchments.
- Recycled Water: Former wastewater (sewage) that has been treated and purified for reuse.
- Linkages of Rivers and Canals: Building canals or redirecting rivers as massive attempts at irrigation in drought-prone areas.
- Land Use: Carefully planned crop rotation can help to minimize erosion and allow farmers to plant less water dependant crops in drier years.
- Water Restrictions: Water use may be regulated (outdoors). This may involve regulating the use of sprinklers, the washing of the motor vehicles, roofs and paths, swimming pools, and also the fitting of water conservation devices inside the home (e.g. shower heads, taps and dual flush toilets).

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