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Drought and its Types

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The word "drought" is a relative term, and is defined differently by different regions and sources. Webster's Dictionary defines drought as "a long period of no rain"; though this is an inadequate definition for the water supply industry. Droughts are major natural disasters for many parts of world. Dry areas, where precipitation pattern is markedly seasonal, or is otherwise highly variable, are the most susceptible. Unlike most natural disasters, drought onset is difficult to identify. Meteorological and agricultural drought occurrences along time and space take place randomly and therefore their scientific quantifications are possible by the probabilistic methods. Drought is complex event which may impair social, economic, agricultural and other activities of society. It is a prolonged, abnormally dry period when there is shortage of water for normal needs. It is temporary, recurring natural disaster, which originates from the lack of precipitation and brings significant economic losses. It is a slow poison, no one knows when it creeps in, it can last any number of days and its severity cannot be predicted. The non-structural characteristic of drought impacts has certainly hindered the development of accurate, reliable, and timely estimates of severity and ultimately, the formulation of drought preparedness plans by most governments. The impacts of drought, like those of other hazards, can be reduced through mitigation and preparedness.

Drought is an extended period where water availability falls below the statistical requirements for a region. It is not a purely physical phenomenon, but rather interplays between natural water availability and human demands for water supply. There are two main kinds of drought definitions: conceptual and operational. Conceptually, it can be defined as "a protracted period of deficient precipitation resulting in extensive damage to crops, resulting in loss of yield".

The Conceptual definitions may also be important in establishing drought policy. Operational definitions identify the beginning, end, spatial extent and severity of a drought. They are

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often region-specific and are based on scientific reasoning, which follows the analysis of certain amounts of hydro meteorological information. They are beneficial in developing drought policies, monitoring systems, mitigation strategies and preparedness plans. Operational definitions are formulated in terms of drought indices. It is not possible to avoid droughts. The success of drought preparedness and its impact, amongst the others, on how well the droughts are defined and drought characteristics quantified.

The defining of drought is difficult; it depends on differences in regions, needs, and disciplinary perspectives. Drought always starts with the lack of precipitation, but may (or may not, depending on how long and severe it is) affect soil moisture, streams, groundwater, ecosystems and human beings which reflect the perspectives of different sectors on water shortages. Drought means scarcity of water, which adversely affects various sectors of human society, e.g. agriculture, hydropower generation, water supply, industry. A combination of droughts or sequence of droughts, and human activities may lead to desertification of vulnerable arid, semiarid and dry sub humid areas whereby soil structure and soil fertility are degraded and bio-productive resources decrease or disappear.