I. DROUGHT MANAGEMENT

Drought is a deficiency in precipitation over an extended period, usually a season or more, resulting in a water shortage causing adverse impacts on vegetation, animals, and/or people. It is a normal, recurrent feature of climate that occurs in virtually all climate zones, from very wet to very dry. Drought is a temporary aberration from normal climatic conditions, thus it can vary significantly from one region to another. Drought is different than aridity, which is a permanent feature of climate in regions where low precipitation is the norm, as in a desert.

1.1 TYPES OF DROUGHT

1. Meteorological Drought

Meteorological drought is usually defined based on the degree of dryness (in comparison to some "normal" or average) and the duration of the dry period. Drought onset generally occurs with a meteorological drought. A lack of precipitation is the most common definition of drought and is usually the type of drought referred to in news reports and the media. Most locations around the world have their own meteorological definition of drought based on the climate normal in the area. A normally rainy area that gets less rain than usual can be considered in a drought.

2. Agricultural Drought

Agricultural drought links various characteristics of meteorological (or hydrological) drought to agricultural impacts, focusing on precipitation shortages, soil water deficits, reduced ground water or reservoir levels needed for irrigation, and so forth. When soil moisture becomes a problem, the agricultural industry is in trouble with drought. Shortages in precipitation, changes in evapo-transpiration, and reduced ground water levels can create stress and problems for crops

3. Hydrological Drought

Hydrological drought usually occurs following periods of extended precipitation shortfalls that impact water supply (i.e., streamflow, reservoir and lake levels, ground water), potentially resulting in significant societal impacts. Because regions are interconnected by hydrologic systems, the impact of meteorological drought may extend well beyond the borders of the precipitation-deficient area. Many watersheds experience depleted amounts of available water. Lack of water in river systems and reservoirs can impact hydroelectric power

companies, farmers, wildlife, and communities. Hydrological drought usually occurs following periods of extended precipitation shortfalls that impact water supply (i.e., streamflow, reservoir and lake levels, ground water), potentially re- sulting in significant societal impacts. Because regions are interconnected by hydrologic systems, the impact of meteorological drought may extend well beyond the borders of the precipitation-deficient area

1.2 Causes of Drought

Land and water temperatures cause droughts. As the temperature increases, more water evaporates and severe weather conditions also increase. Landscapes and crops need more water for their survival and growth and thus the overall demand for water increases gradually.

1.3 Consequences of drought are

- Diminished crop growth or yield productions.
- Dust bowls and Dust storms, when drought hits an area suffering from desertification and erosion.
- Famine
- Habitat damage – affecting terrestrial and aquatic wildlife.
- Hunger– drought provides too little water for food crops and human beings.
- Malnutrition, dehydration and related diseases is a major consequence.
- Mass migration of people in search of food and water is very common.
- Shortages of water for industrial and domestic purposes.
- Fight over natural resources, including water and food.

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