

Scrutinizing Drought's Condition in the Coasts of Persian Gulf

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Abstract— Drought is one of the hydraulic events, the occurrence of this phenomenon is inevitable and most of the times it causes many social and economical damages to the place. The direct and indirect damages of drought depend on the intensity, continuance and extent of this natural event; and also it depends on the schematization of countries. By adoption of suitable methods the damages of this phenomenon can be reduced. There are different methods for evaluating drought and each of these methods have their own specific features. In this article the information of rainfall in Hormozgan during the years 1353-54 to 1382-83 is being used, and after rainfall analysis, the condition of drought have been examined via the information. This study has many indexes such as; percent out of norm (PN), standard deviation (SD), rainfall classification (CP) and standard distribution. The analysis shows the usage of this indexes for quantifying drought components at the study station. The result of this study showed that in the period of research, the abundance of droughts in light scale, (Weak Droughts) had been more than others; also it showed that in this period the drought has an increasing procedure with no specific regulation.

Keywords-: Drought analysis, Persian Gulf, percent out of norm, standard deviation, rainfall classification, standard distribution.

I. INTRODUCTION

Among natural events, drought has a higher importance because of its features such as pervasiveness, wide expansion and its long lasting quality. The effects of drought may last for many years after it has been finished. Drought is one of the environmental phenomenon that is inseparable from continental changes. In fact, this phenomenon is one the basic and repeating features of different hemispheres, drought may occur any where and cause water-shortage there. There are too many definition for droughts, one of its complete and universal definition, has classified drought in 4

sections, aerology, hydraulic, agriculture and economical-social [1].

Aerology drought occur when the annual rainfall amount is less than, the average of this long period one. By referring to the fact that more than 82% of Iran is located in dry and semi-dry zone of the earth, water-storage and drought is a continental phenomenon and a permanent fact for Iran and some other countries in this zone. The geographical location of Persian Gulf, coincide with south of Iran that is one of the places in which the occurrence of drought is rampant. Because of high temperature range, evaporation is ample in this zone and this evaporation can cause a long drought; and as a result most of the possible rainfalls are being missed. Occurrence of droughts with different severity, in dry and semi-dry zones, because of intense undulation of rainfalls and high vulnerability of this zone against drought, cause many harmful damages to different parts of the place such as agriculture, industry, water and etc. Drought decreases the surface water and in contrast, increases the use of the underground waters; as a result of this unremitting revenue operation, after some years and especially after some incessant droughts, fields and water pools would have water-shortage and water level would descent yearly. Further, these kinds of droughts destroy water sources especially in dry zone. For the sake of decreasing drought's damages, it is obvious that shifting management to risky management is inevitable and supervising and examining droughts is one of the risky management's necessities [1-2].

II. THE IMPORTANCE OF EXAMINING THE INTENSITY, EXPANSION AND DURATION OF DROUGHT DATA AND METHOD

Drought's indexes are very important for supervising and examining the drought. Studying the three features of drought (intensity, expansion and long lasting quality) and also comparing drought from one zone to another demand the use of drought indexes at different times. Drought indexes enable us to qualify the intensity and the expansion of drought and also we can evaluate them periodically. Drought duration or in