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Discussions

Interactive comment on "Empirical Study on Drought Adaptation of Regional Rainfed Agriculture in China" *by* Z. Wang et al.

Anonymous Referee #1

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Summary: The study try to establish a conceptual model of the relationship among human adaptation, development demand and environment changes to analyze the mechanism of agricultural drought adaptation based on an empirical research at the famer and government level. However, it is poor in quality in both its contents and its methodology used. The research is rather lengthy and contains lots of descriptive information, lacking serious analysis with quantitive methods. The conclusion that the interaction among environmental change (E), development demand (D) and adaptation measure (A) maintain the dynamic balance of the regional natural-social-economic compound system is common sense to public. The conceptual model of the agricultural drought adaptation mechanism built in this study is therefor of quite low value in research point of view. There are also some major errors in data and English that reduce the credibility of the work. Thus this manuscript does not pass the NHESS bar for the research on

drought.

Specific concerns: (i)As the population is one of the most important factors in building the so called conceptual model, the author argued in page 4 "The population of Shidian County is approximately 33 million. It has a total land area of 2,009 hectares and a per capita cultivated land area of 0.07 hectares." It is almost half of the population of France. How a small area like this holds such large population for Shidian, a small county in Yunnan province of China? The small area of the county is also very questionable. There are also some other errors. For example, the caption of Figure 7 seems should be precipitation, not temperature, etc.

(ii)The title suggests that this is an empirical study on drought adaptation of regional rainfed agriculture in China. Actually, the authors only select a small county as the study area. As China has large area of rainfed agriculture, it is questionable for the representative of the study area.

(iii)The methods used in the manuscript seems to be too simple and the way of the writhing lacks in quantitive analysis, which turns the work into a descriptive study with quite less reliability in scientific points of view. In terms of the drought indices, the authors used the De Martonne's aridity index (Iar-DM) , the ratio between the mean annual values of precipitation (P) and temperature (T) plus 10°C (Martonne,1926). As both soil moisture or evapotranspiration can more directly reflect the drought condition in the rainfed agriculture area, the selection of the index from lots of aridity indexes should be reconsidered.