Comment on bg-2022-173
Anonymous Referee #1

Referee comment on "Contemporary biodiversity pattern is affected by climate change at multiple temporal scales in steppe on the Mongolian Plateau" by Zijing Li et al., Biogeosciences Discuss., https://doi.org/10.5194/bg-2022-173-RC1, 2022

This paper studied the response of three dimensions of biodiversity of grassland in different periods of climate change, and formed a theoretical framework for their impacts on community biomass, based on 152 grassland sites set on Mongolia Plateau. It's a good job.

My only concern is that, were the community biomass measured in the same year or not? If there’re measured in the same year, is it a good year or a bad year (biomass always varies greatly from year to year, especially for grassland)? Data matching is always a big problem. Data on meteorological and plant functional traits used in this paper are obtained as interpolated or observed averages, whereas data of community biomass are measured values.

Minor commence:

Line 10: Pastoral

Line 49: 'biodiversity and ecosystem functions' is not one word.

Line 60: the abbreviation of BEF is not appropriate here.

Line 80: need reference.
Line 82: the location of the reference is inappropriate.

Methods: Why five indicators of functional diversity were selected, while only three indicators of other two kinds of diversity were selected? Would it affect the results of their “relative effect”?

Discussion: the answer to science question 3 needs to be strengthened in the discussion section.