Comment	Response
Line 46-48. Include more recent studies to support the frameworks and models to project and compare future land-use and land-use-related variables.	In Lines 46 and 48, we referred to the most representative papers, which concerned land-use dynamics and intercomparison of multi-model outputs. However, we agree that additional papers are needed to provide more context and resources. Considering this, we will add newer intercomparison papers in lines 46-48 to tackle this point. The updated 46-48 lines would look like this: "For this purpose, various frameworks and models have been utilized to project and compare future land use and food system-related variables focusing on crop and livestock production, food prices, use of resources, changes in land-use areas, among others under different scenarios (Sörgel et al., 2024; Weindl et al., 2024; Doelman et al., 2022; Rose et al., 2022; Lèclere et al.,2020; Hasegawa et al., 2018; Popp et al., 2017; Nelson et al., 2014; Popp et al., 2014b)"
Lines 61-75 should be part of the methods section.	We will summarize the information and leave the details in the methods section.
Line 100. Not clear how the demand for bioenergy production aligned with climate policies was determined.	For MAgPIE, REMIND provides information on GHG pricing and the demand for second-generation bioenergy crops (lignocellulosic feedstocks). REMIND determines this demand by considering the supply, trade, and conversion of biomass feedstocks through the value chain, while accounting for energy sector market conditions and regulatory frameworks in each socioeconomic growth scenario (as detailed by Merfort et al., 2023). Since these scenarios are aligned with specific climate change pathways, bioenergy demand is intrinsically linked to emissions budgets and carbon taxes required to achieve particular warming targets. In IMAGE, the TIMER energy model defines bioenergy demand based on land supply, biomass productivity, input costs, and learning dynamics, which together influence bioenergy prices. Climate policies in the IMAGE framework are designed to meet long-term climate targets by establishing global emission pathways. These pathways determine carbon tax prices and mitigation costs, which, in turn, affect bioenergy prices and demand (as detailed in Doelman et al., 2018). This explanation, including references, will be added to Table A1 in Appendix A.
Given that the study's purpose was to identify uncertainties, the authors should discuss more in detail the implications of these models when used, particularly for policy making. More examples like the one presented in lines 454-456 are missing.	Although the data and the study described in the manuscript were initially intended to inform impact modelers using our data as human forcing inputs within the ISIMIP context, this comment has brought to our attention that the data will be publicly available and could be utilized by users from various disciplines and sectors. In response to this, we have decided to add the following paragraphs to the discussion: “Additionally, differences in land-use projections are expected to directly affect the impact models that use this data as input. For instance, grasslands are among the ecosystems with the highest wildfire frequencies (Donovan et al., 2017). Therefore, uncertainty in LUMs×GCMs grassland projections could influence the identification of fire hotspots due to human-induced effects (Thompson and Calkin, 2011). Uncertainty propagation stemming from land-use patterns could also impact, e.g., the calculation of emissions from land-use transitions (Neuendorf et al., 2021), shifts in biomes (Alexander et al., 2017), the assessment of ecosystem services, habitat intactness, and biodiversity (Yang et al., 2024), among others.” “The uncertainties observed in land-use variables at different resolutions arise from error propagation throughout the modeling workflow, as well as from scenario modeling approaches and other factors. These uncertainties highlight the need for conscientious use of the reported data, carefully considering its limitations. The objective of the data is to provide a global overview of land and agricultural systems and their development under a set of socioeconomic and climate scenarios based on different assumptions.In the context of policy and management decision-making, the data presented here should be seen as an overview of global trends. However, it is not intended to replace targeted assessments and actions specific to, e.g., country, local, or regional levels that include contextual knowledge—including input from communities and experts— that should be incorporated during the assessment and planning phases to ensure that proposed actions align with actual needs in the policy-making context (Neuendorf et al., 2021).”

Authors provide a rich set of results, however a summary key messages across land uses and global regions are missing, that is, messages that contextualise the value of the findings for decision making based on modelling outputs. This could be done in the abstract or in a conclusions section	We agree with the reviewer that the manuscript contains a substantial amount of information, and we acknowledge that both the text and the reader would benefit from a summary of the key messages. To address this, we will include summaries of the key messages in the suggested locations and at the end of each section.