The study analyses the propagation of meteorological to soil moisture, streamflow and groundwater droughts in 50 catchments selected from across Sweden. Drought propagation is analyzed by calculating lag times and propagation probabilities which are computed on standardized time-series of meteorological and hydrological variables. The study tries to address an important knowledge gap of understanding drought propagation in high latitude watersheds. The paper is very well written; the motivation and methodology are clearly stated, and results are presented in a logical sequence. The quality of figures in the paper is exceptionally good and there are several interesting findings from the study. However, I feel that there is a need to strengthen the discussion section of the paper. The authors have mostly discussed findings which are well-established in literature such as faster propagation of meteorological droughts to soil moisture and a more delayed response on streamflow and groundwater. The authors should try to highlight findings unique to the study region which have not yet been found in other regions. The analysis on the role of catchment properties also needs to be enhanced. The following are my detailed comments:

1. Section 2.3: The major novelty of the study, as highlighted by the authors, is to analyze drought propagation in high latitude catchments. But the authors have not highlighted the aspects of drought propagation which are unique to high latitude catchments. Despite the importance of snow-related processes, particularly in clusters 1 and 2, the study has been carried out using SPI - in a similar manner to drought propagation studies in lower-latitude regions. Snowmelt, which is an important source of streamflow and groundwater recharge in high latitude regions, is controlled by a complex interplay of temperature and precipitation. It would be great if the authors could include snow-related variables such as SWE into the analysis and bring out novel insights regarding its role in drought propagation, which remains an important knowledge gap.

2. Section 2.5.1: The authors have used lagged-cross correlations to analyze the lag times between meteorological droughts and other drought types. The authors mention that the correlations are being calculated only for drought periods. Does that mean correlations are being calculated only for periods with SPI<-1 or when SSMI/SSFI/SGI<-1 or both? Please clarify.

3. There are several interesting results in the study which have not been discussed in much detail.

    (1) The first of them being the high streamflow and groundwater drought propagation probabilities in cluster 4. While both cluster 4 and 5 are rainfall dominated, why are the probabilities so high for streamflow droughts in cluster 4 (Figure 6)? In L518-525, the authors have listed some factors which “could be” responsible for these differences such as soil water holding capacities but without much analysis. Soil type and land use land cover maps of the study region, if available, can be used to investigate the reasons for this observation. Also, why is there a significant difference between propagation probabilities of cluster 1 and 2 for streamflow and groundwater droughts in Figure 6?
    (2) Figure 7: While it is clear that the propagation probabilities for soil moisture droughts are highest in summer due to higher evaporative demand, the reasons for streamflow and groundwater drought propagation probabilities is not very clear. Why is propagation probability higher for streamflow and lower for groundwater in Autumn?

(3) Figure 8: While soil moisture propagation probabilities increase from north to south, the streamflow propagation probabilities decrease from north to south during summer season. Why?

The authors can explore the physical mechanisms underlying these interesting patterns observed in the statistical analysis. The authors may add maps of physical features such as soil type, vegetation, land use, runoff coefficients, baseflow index, snow fraction and geological features, if available, to better explain these patterns. Such analysis may reveal unique insights regarding drought propagation in high latitude watersheds.

4. In Figure 9, the authors use correlation analysis to understand the physical factors affecting propagation probabilities and lag times. Physical catchment features like soil type and land use are also considered. However, I wonder if this analysis makes sense for soil moisture droughts considering that soil moisture droughts have been analyzed using reanalysis dataset in this study. Reanalysis models do not have a very accurate representation of soil types and land use features. Thus, conclusions based on this analysis could be misleading.

Minor comments:

1. L494: I could not follow why places with delayed groundwater response would require more proactive management. Shouldn't it be reverse?
2. L515: Please change to "other factors also".
3. L556: Please delete the extra comma.
4. L600: How can annual rainfall and streamflow be used for drought forecasting? Please elaborate.