We thank the referee for the evaluation of the manuscript. The suggestions will help significantly improve the readability of the paper. A point to point response follows, where the referee comments are in *italic* and our respective answers given below.

The paper is well written, but I still find it difficult to read. I encourage the authors to present a clearer "take-home-message."

There are several take-home messages, which we will try to bring out more concisely and clearly.

1. Recent studies indicate that past abrupt climate change may have arisen as a cascade of tipping points in climate subsystems. We synthesize this into a conceptual model.

2. We suggest that in general rate-induced tipping makes cascading tipping events more likely, as demonstrated in the conceptual model

3. The analysis of the model yields new insights relevant to dynamical systems in general, which relate to a) “soft” tipping points and b) early-warning for rate-induced tipping.

I have a few suggestions and questions that the authors may use in their revision:

1. *Why not present and analyze the coupled model (Eq. 6) before discussing rate-induced tipping in the Stommel model? I feel that a "standard analysis" of the model in Eq. 6 is missing? You have a relatively simple dynamical system and one control parameter (R). Don't you have a simple saddle-node bifurcation in the three-dimensional system?*

Indeed, we decided to leave out a standard bifurcation analysis of the coupled system. Since the coupling is unidirectional, it is much clearer to regard the separated bifurcation diagrams of I with respect to R and (T,S) with respect to eta_1(I).
The bifurcation diagram in the coupled system is a “quadruple” fold. This holds in general when two systems with a double-fold are coupled unidirectionally. See Fig. 1 in Dekker et al. Earth Syst. Dynam., 9, 1243–1260, 2018, for an example of this. Since our model features Heaviside functions, some of these folds are “non-smooth”, which makes the bifurcation diagram quite difficult to read.
Further, we do not explore the full quadruple fold here, since only the cascade of sea ice collapse and ocean circulation resurgence is regarded. To summarize, for our purposes it is sufficient and preferable to present the individual bifurcation diagrams of the sub-systems, but we can offer to add a figure with a bifurcation diagram to the Supplemental material.

2. *As you go into more detail, is it possible to be more precise? I feel that it becomes very descriptive.*

We are unsure what exactly is meant here, but will try to generally improve the clarity and rigor where possible.

3. *How important is it that the Stommel model has a bistable regime? What would happen if you just coupled the sea-ice model to a simpler model with a smooth transition between "modes".*

It is important, since otherwise the dynamics would be qualitatively different. First, there would not be any rate-dependent phenomena, which is a main focus of the paper. Second, there would be no hysteresis, which is a crucial feature that is typically invoked in the stadial-interstadial dynamics (even though we do not specifically make use of the hysteresis here since we model only warming). Finally, a main aim of the paper is to investigate how cascades of tipping points may have played a role in past (and potentially future) abrupt climate change, and how this may be predicted. This must be done with a model that involves tipping points in multiple components.

4. *I would like to see a discussion of how your proposed EW indicator would work in a "real-data setting".*

We agree that it is helpful to add some comments regarding this in the revised manuscript. The main steps would be time series embedding, choosing the optimal embedding dimension, and then estimating the Jacobian from the reconstructed multivariate time series.

There are a few typos in the manuscript. You'll find them when you read through it carefully. I am looking forward to reading a revised version.

Ok.