

## ***Interactive comment on “The influence of sea surface temperature on the intensity and associated storm surge of tropical cyclone Yasi: A sensitivity study” by Sally L. Lavender et al.***

**Sally L. Lavender et al.**

sallylavender@gmail.com

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RC2, comment 1: The term ‘sensitivity study’ is a little confusing. A more suitable term might be ‘idealized study’ since this study examines the response of TC Yasi to warmer/colder SSTs in an idealized environment.

Response: We would disagree, a sensitivity study is the response of small changes in an input variable and hence the response to TC Yasi to warmer/cooler SSTs is just that. The term idealised is included throughout the paper.

To further clarify this line 11 (in the abstract) will be altered in the revised version: “In

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this study, a conceptually simple idealised sensitivity analysis...”

RC2, comment 2: The term ‘potential destructiveness’ should be clearly defined in the manuscript. There are a number of factors that can determine the ‘potential destructiveness’ of a tropical cyclone. These include, but are not limited to, the characteristics of the tropical cyclone (e.g. max winds, size, translation speed) and the populated areas affected by the TC (e.g. population size, infrastructure). As such, it would add clarity to the manuscript if the term ‘potential destructiveness’ was defined.

Response: In the manuscript there is already the line (pg 7, line 26): “The integrated kinetic energy (IKE, Powell & Reinhold 2007) takes into account both maximum wind speeds and storm size and is therefore a good measure of the destructiveness of a TC.”

The main text and abstract will be altered in the revised version to further clarify this.

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