Natural Hazards and Earth System Sciences Discussions

Nat. Hazards Earth Syst. Sci. Discuss., referee comment RC2
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Comment on nhess-2022-147

Anonymous Referee #2

Referee comment on "Development of black ice prediction model using GIS-based multi-sensor model validation " by Seok Bum Hong et al., Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2022-147-RC2, 2022

By mixing System Dynamics and GIS, this study overcomes the weakness of System Dynamics, which is challenging to use spatial information. Since Black Ice Prediction in this paper was performed on various scenarios using spatial and meteorological data, so it is judged to be differentiated from traditional studies.

The paper is well written but needs to be improved further. Additional considerations should be given to the following.

1) The units must be unified. For example, g/m3 and g/m2 are virtually the same.

2) The map in Figure 4 should also show the total length of the test road, and this is because it does not cover the entire Suncheon Wanju highway, so the scope should be seen more intuitively.

3) The map in Figure 10 should include a background illustration so that the reader can monitor the installation environment of the sensing system. In connection with the modeling results, it would be great if the reader could understand the environment in which the sensor is installed more intuitively.

That is all from my end.

Thanks.