Dear Patrizia

Thank you very much for your constructive review. We are happy to hear that you also judge our approach as valuable for practical applications.

Here are our answers to your suggestions (your comments in italic):

- *Page 1, line 13-14: For the canton of GR, data from the "SilvaProtect" project are available at the hazard indication map level. However, these only show potential areas with avalanches. In contrast to the maps presented in this paper, the data from SilvaProtect do not show impact parameters such as avalanche pressure.*

We clarify this point in the revised version by explicitly mentioning the products of our approach.

- *Page 2, lines 1-6: The avalanches in SilvaProtect were originally modeled for the delineation of protective forests. It was not the goal to use it to create a hazard indication map. However, due to the lack of alternatives, the data is sometimes used to identify potential areas with avalanches.*

We will add this statement to this section.

- *Figure 1: In this figure, the climatic regions appear for the first time. It would be helpful to explain briefly that these regions are used to regionalize avalanche modeling.*

We will add this information to the Figure caption

- *Page 4, lines 12-13: The standard procedure for snow avalanche hazard mapping in Switzerland defined by the Federal Office for the Environment FOEN defines only three different return periods 30, 100, 300 years. The return period 10 years is optional.*

We will add this information.

- *Chapter 3.2: This chapter is short. It is not possible to understand how the effect of the forest was assessed. Threshold values are mentioned without presenting them. In order to be able to understand the results, the limit values should be presented or it should be shown at the beginning of the section in which paper the limit values can be found (Bebi et al. 2021).*

We will extend this section for example by adding a table summarizing the most important threshold values. We will also move the Bebi et al. (2021) citation further up in the text.

- *Page 5, lines 7-8: "The main input datasets are the binary forest information (chapter 3.2) and the digital terrain model (DTM, chapter 3.1)."*

We will add the missing subsection numbering

- *Chapter 4.1: This chapter explains the identification of protection forests. In Switzerland, the cantons are obliged to delineate protection forests. Therefore, a comparison with the existing protection forest delimitation of the canton GR would be interesting.*

We agree that a comparison with the existing protection forest layer of the canton is interesting. However, we classify all forest present based on remote sensing input and not only the forest estimated as official protection forest by the responsible persons. We are planning to start a further study, comparing our new approach with existing layers in collaboration with the canton of Grisions. However, in our opinion it would overload this paper to include comparisons already here as it would also be necessary to explain and discuss the comparison.

- *Figure 7: The colors shown for maximum pressure lead to misinterpretation. In hazard maps, the colors express the hazard level and not the maximum pressure. We recommend using the colors of the intensity maps (three different greens) to display the maximum pressure.*

We had intensive discussions within the author team about the optimal coloring of the maps. We see your point of proposing other colors for the pressure values. However, as we want to compare our results to hazards maps, we decided to use the colors corresponding to the threshold values used in hazard mapping in Switzerland (< 3 kPa, 3 – 30 kPa and > 30 kPa). In Figure 10, where we use the same coloring as in Figure 7, it is essential to do so to enable a comparison of our results with the existing hazard maps. As this is a scientific paper targeting scientists, we think this coloring is most meaningful. Based on these arguments we want to keep the current color scale of Figure 7.

- *Chapter 5.1: For the comparison of the existing hazard map with the modeled ones, it is important to know how the protection forest is considered in the existing hazard maps. Please explain briefly so that the comparison can be understood.*

Thanks for this hint, we will add a brief explanation of how the forest is considered in hazard mapping in Switzerland.

- *Figure 10: Both maps show the colors red, blue and yellow, but the colors do not have the same meaning. In hazard maps, the colors express the hazard level. In the avalanche hazard indication map the colors show the maximum pressure. The hazard maps show not only the flow avalanches but also the powder avalanches. In the indication map, only the flow avalanche is taken into account.*

As explained in the previous point on the color scale, we choose the colors according to the threshold values applied in Switzerland for hazard mapping. This enables in our opinion the best comparison between the hazard maps and our results. We will add a sentence highlighting again that we do not take powder pressures into account to make it clearer.

- *Chapter 5.2: In the modeling only one type of avalanches was modeled (dense flowing part of dry avalanches). In the event analyses, other types of avalanches were probably also recorded. How does this affect the comparison of real data vs. model?*

The avalanches mapped by satellite and present in the existing cadaster are in the vast majority of the cases the outlines of the deposited debris. Therefore, this corresponds well with our simulations. There might be some isolated cases, where also impact of powder clouds were mapped. But we do not expect that this has any influence of the statistics. We add a sentence to clarify this point.