

Public justification (visible to the public if the article is accepted and published):

Dear authors, and referees, many thanks for your contributions. Dear authors, thank you for your throughout revisions and adding additional data to your ESSD project.

There are minor editorial requirements for revision left before the manuscript can be published:

Dear Editor, Thank you for your thoughtful and constructive feedback on our manuscript. We appreciate your recognition of our efforts to improve the paper through comprehensive revisions and the addition of further data to HR-GLDD.

In general

i) an event year with a major landscape-wide landslide event and a region are needed for the identification of the specific data sets, accordingly, you can optimize the naming of the data sets in your manuscript text, tables, figures,

f.e., Figure 1 naming convention ((subregion) region and year) could be kept also for the naming in 'collections 2 and 3' in figure 2, also in the tables 1 (Papua New Guinea, New Zealand, Congo you could add the year of the event(s)), table 2 and figure 3.

f.e., manuscript text, chapter 2 L137 '...we selected 8 regions...' and number of events- Accordingly,

Thank you for the comment; we have made the suggested changes in the abstract and also throughout the text. See lines 23- 34 in the abstract and figures 2 and 3, and also tables 1 and 2.

ii) you are introducing in chapter 2 two times Papua New Guinea in 2,1 and 2.11 - 2.1 Papua New Guinea, describes a 2018 landslide event and 2.11. Porgera, Papua New Guinea, describes a 2018 event –please combine Papua New Guinea 2.1 and 2.11

Please see updated section 2.1.

iii) f.e., in abstract L30 and chapter 3.2, L309 You name two recent landslide events, or two regions of unseen data – it should be three that you put in for validation? Please carefully check your manuscript

Please see the change in line# 34 in abstract.

iv) Github and Dataset publication are well set up, abstract text and figures would need to be updated for the final manuscript publication, e.g. also putting in the technical information on PlanetScope, used bands and binary mask in the Zenodo abstract

Please see line #23-34 in abstract.

v) in ESSD, data sets need to be cited in the reference list:

Sansar Raj Meena, Lorenzo Nava, Kushanav Bhuyan, Silvia Puliero, Lucas Pedrosa Soares, Helen Cristina Dias, Mario Floris, & Filippo Catani. (2022). HR-GLDD: A globally distributed high resolution landslide dataset [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.7189381>

we have cited the dataset in the reference list.

vi) ESSD requires a detailed description of the data sets, please add some more technical information on source and characteristics already in the abstract

HR-GLDD), a high resolution (HR) satellite dataset (PlanetScope, 3 m pixel resolution) for landslide mapping landslide instances from ten different physiographical regions globally: South and South-East Asia, East Asia, South America, and Central America. The dataset contains areas of five rainfall triggered and five earthquake triggered multiple landslide events that occurred in varying geomorphological and topographical regions in the form of standardized image patches containing four PlanetScope Image bands (red, green, blue, and NIR) and a binary mask for landslide detection. Figure 2: you could put this data collection information in the empty box 'HR-GLDD'

[Please check abstract and figure 2.](#)

Specific

i) chapter 3 L282 The images from both sensors are orthorectified and radiometrically corrected by the providers.

PlanetScope Image data can come from 3 different sensor types: PS2, PS2.SD, PSB.SD

Please mention if, did you undertake the intrasensor harmonization process for the specific bands that is offered by PlanetScope?

[Please see lines# 286-287, we have added "we undertook the intrasensor harmonization process for the red, green, blue, and NIR bands that is offered by PlanetScope".](#)

ii) chapter 3, delineation of the landslide areas polygons, how did you manually delineate the landslides to create the binary masks, e.g. did you use quasi true RGB or False Colour Image? Please add a sentence

[Please see line #290.](#)

iii) Figure 4, please add an explanation of the color coding of your visualization of the binary masks, e.g., yellow = Landslide, black = background.

[We have added the explanation in figure 4, 5 and 6.](#)

iv) We agree with Reviewer 3 concerns that the presentation of the Dice Loss equation in its current form is confusing, e.g. you are using the Calculus mathematical language, i for imaginary number, and N indexed by l , however, the equation in the manuscript goes on in the form of computer scripts, please bring the Dice coefficient equation, or extended as Dice loss equation into the form of an integral equation with denominators and numerators, (Lee et al. 2019, Milletari et al., 2016), see also further questions in attachment.

[We are sorry for the wrong dice loss equation, it was result of formatting issue in Microsoft word, we have updated the section 4.2 model training.](#)