The authors have constructed a much-needed dataset on the systematic collection of data on Italian river catchments. This unprecedented dataset at the national scale provides the most complete catchment attributes based on climate, geomorphology, soil, and land use features. This dataset opens opportunities for hydrological studies at regional and national scales such as the control of catchment attributes on the river flows. While the results look convincing and nicely presented, I have several comments that might be helpful for the authors to further improve the manuscript.

Line 28, is the name CAMELS an acronym? If so and if it is the first time you used it, please, provide the full meaning of it then you can use only the acronym in the rest of the text. There are several acronyms without the meaning at their first use (e.g., SIMN [line 76], VAPI [line 94], …), please check and provide the meaning.

R: We thank the reviewer for having highlighted this point. In the revised version of the manuscript we inserted the full meaning of each acronyms (such as CAMELS and VAPI). The meaning of SIMN was already present in row 51.

Lines 27 to 53, you started with examples of the dataset at the countries' levels. After that, you mentioned an example at the global scale (line 36), and then you returned with an example of Italy. To be consistent, I will suggest that you start with a global scale example, followed by examples at the countries' levels.

R: In the revised version of the manuscript we moved the global scale example at the beginning of the section (row 24-27).

Line 32, for all the website links provided in the text (e.g., lines 82, 94, …), please, could you mention the date at which these sites were accessed. This suggestion is valid for all the links in the rest of the text.

R: In the revised version of the manuscript we inserted the dates.

Lines 68 to 73, this part need to be rewritten. Please, provide a clear objective for each section. Things seem to be merged. In the text, sections 3 and 4 present the same things, even though they are from different sources. To allow readers to better understand the article, I suggest that section 3 presents all the datasets used to derive the different attributes. Section 4 highlights the methodology used to derive those attributes and finally, another section presents all the derived attributes from climate, geomorphology, soil, and land use features.

R: We thank the reviewer for the comment but we suggest that is preferable to keep the current article structure, that is consistent with the one used in most of the articles related to other national datasets, such as the CAMELS ones. In this way, the reader can easily compare all the articles by searching information in the related "common" paragraphs.

Line 120, I found this text " The database features are presented in two different sections. Section 3 discusses the determination and validation of the attributes depending only on the landforms. Section 4 presents various other features mainly obtained through spatial averaging of rasterized information. " redundant compared to the text at the end of the introduction part.

R: We agree with the reviewer: in the revised version of the manuscript we removed this redundant part.

Line 124, section 3.1. What motivates the choice of SRTM and not the other DEM such as Multi-Error-Removed Improved Terrain (MERIT) or Forest And Buildings removed Copernicus DEM (FABDEM) which are considered as digital terrain model (DTM) while SRTM is a digital surface model (DSM) that includes trees and other artifacts? For catchment delineation or geomorphology study in general, elevation is a crucial parameter. DSM refers to the upper surface of natural and built or artificial features of the environment such as buildings, artificial features, and trees while DTM represents the elevation of the Earth's surface with all natural and built features removed.

R: When considering the choice of digital elevation/terrain model for catchment delineation or geomorphology studies, several factors come into play. While it's true that elevation is a crucial parameter for such studies, the choice between different DEMs/DTMs depends on the specific requirements and objectives of the research. In this work we decided to use SRTM to be consistent with previous research works performed over Italy, even if we are aware of the limitation of this dataset. Moreover, FABDEM was not available at the time of the realization of this dataset.

Line 185, the authors talk about 61 geomorphological attributes in the text, but the table presents almost 36 attributes. How can you explain this?

R: The total number of attributes that we computed is 61 even if, for the sake of brevity, they are collapsed into 36 different names. As an example, the elevation values of the hypsographic curve (i.e., the curve that defines the distribution of catchment areas located above a specific elevation) are summarized in the attribute "elev_x" with x = 2.5, 5, 10, 25, 50, 75, 90, 95 and 97.5% of the basin area. This means that for "elev_x" we have 9 different descriptors, one for each percentage. The same applies also for other descriptors, such as "HS_num_u" and "width_mean". So, in the end, the total number is 61.

Line 189, the name of the table should be moved above the table not below. Please, check for the tables presented in the text.

R: In the revised version of the manuscript we moved all the descriptions above the tables.

Figure 5, Fig. 5a stands for the percentage of clc1, not the inverse. Please correct the caption.

R: We thank the reviewer for having pointed out this error. In the revised version of the manuscript we corrected the caption.

Line 330, is there a difference between mean monthly rainfall depths and mean monthly precipitation? If there is one, please explain the meaning of each term.

R: In that section we used the word "rainfall" as synonym of "precipitation" to avoid repetition. In order to avoid misunderstandings, in the revised version of Section 4.2 we refer to precipitation.

Line 231, some typological errors in the sentences need to be corrected. Insert a comma after this sentence" To provide a robust set of catchment features ". Also in other sentences, such as in line 381, correct the word "thr in the". Please, cross-check the entire article.

R: We thank the reviewer for having highlighted these errors: we have carefully checked the English and in the revised version of the manuscript we corrected them. We have also asked an English native speaker to revise the manuscript.