

Probable Maximum Precipitation Estimation in a Humid Climate

By: Afzaligorou et al.

In general, the authors have addressed many of the concerns and issues that were raised in my previous review of the manuscript. However, the introduction section is still poor in terms of content. A comprehensive review of the relevant literature is lacking. Also, the result's section needs to be updated to provide additional discussion on the results they obtained.

I recommend **Moderate Revision**, and specifically addressing issues related to the introduction and the results section.

Major Comments:

1. Introduction: The introduction is too short, and the body of the introduction section is only one paragraph, lacking sufficient background information. Furthermore, a review of literature on the physical approaches for PMP estimation is lacking which can enhance the introduction.
2. The results section needs to be updated to add additional discussions and analyses on different aspects of the results they already obtained. Just providing one or two sentences that are obvious from the figures or tables is not appropriate for a paper at this level.
3. An appendix section must be added to give a brief overview of the PMP Calculator app, along with its download link for the interested readers.
4. Authors are strongly encouraged to check the grammar and language of the manuscript before resubmission. Some of these errors are mentioned here, but there are more errors and typos that need to be corrected.

Minor Comments:

P1L19: Must be “rainfalls”

P1L19: delete “one” , replace with “among”

P1L19: What are social damages? Damages to societies seems to be more relevant here.

P1L22: Replace “specific project” with “hydrologic infrastructure”

P1L25: Where does the quotation end?

P1L26: “A statistical …” Review of statistical methods should go to a separate paragraph.

P1L29:30 years “of” daily data ...

P1L28: “basins”

P1L29: “kilometers”

P1L29: Mention the names of other statistical methods and discuss their differences. Also mention why the Hershfield method is more popular. Review of statistical methods must be a separate paragraph for itself.

P2L1: Any references?

P2L2: Discuss the physical methods in a separate paragraph.

P2L2: “characteristic of the deterministic...” Not sure what you mean!

P2L6: Some physical methods are mentioned; however, nothing special about their characteristics and differences have been mentioned. The only thing mentioned is that they are not easy to use. Please consider adding more details about the different physical methods, and their differences and pros and cons. Also, keep in mind that the difficulty in estimation is not the case in many parts of the world.

P2L8: Comparison of the physical and statistical methods need to go to a separate paragraph. A more detailed review of the literature is required. For instance, why in some regions the two methods give similar results and why in some other regions they are totally different?

P2L11: “The results of these researchers have indicated that although the statistical approaches provide larger estimates of PMP, it is proposed for areas where hourly rainfall, dew point temperature, wind speed, and vertical radiosonde measurements are unavailable”

The first and the second statements are irrelevant to each other.

P2L18-19: It has already been mentioned in L11.

P2L19: What is the overall conclusion from these studies?

P2L20: Replace “was” with “is”

P2L20: delete “written” and write “prepare a” instead

P2L20: Estimation alone is not a good goal for a paper. You can draw more useful information from your results. For instance, using the PMP24 maps, you can specify the regions that are more likely to experience intense storms. Such information could be useful for water resources planning and management, flood risk assessment, and catastrophe management.

P3L2: Where do you want to put figure 1?

For figure 1, it is also suggested to name each of the small figures, as a, b, and c. Then, give a short description in the figure caption for each of them.

P3L17: Delete “then”

P3L18: To be added to what?

P3L19: Delete “of America”

P4L1: should be “the” standard deviation

P4L2: To do what? Say, the goal first; then, mention the steps.

P4L12: Information about the discharge data is still missing in the data section. Add it!

P5L12: mean “squared” error

P6L20: Provide more discussion on figures. Is there any specific gradient in the PMP values? Which parts of the basin experience more severe storms? Is the basin homogenous in this regard? Which parts of the basin experiences more extreme precipitations? Why?

P8L4: Replace “have been” with “are”

P8L13: delete “s” from “whiles”

P8L14: Not sure what does the most moderate mean!

P9L4: “Based on” not relevant to the previous sentences. It could be a separate paragraph, joint with the next paragraph.