RESPONDS TO REVIEWERS First of all, we would like to express our deepest gratitude and appreciation to co-editors and
all reviewers for the feedbacks and inputs so we could improve our manuscript. Based on the suggestions by co-editors and reviewers, some significant revisions have been made.

1. Response to editor

Major comments:

Comment (1):The abstract should include a little background, an explicit purpose of the research, a detailed but concise methodology, the results and highlights of the findings, and a few statements of comparison with the same case with other places.

Answer (1): Yes Thank you, We have include little background, an explicit purpose of the research, a detailed but concise methodology, the results and highlights of the findings, and a few statements of comparison from previous study as suggested. (Please see page 1 abstract)

Comment (2) Enhance the discussion of the results and compare with other relevant
studies.

Answer (2): Thank you for your suggestions. We have included the comparisons with other relevant research(s) in each sub-chapter of discussions (Please see page 12 line 333; page 13 Line 355 ;page 14 Line 385; page 17 Line 408)

Comment (3) Make sure you address the international reader of the paper, so discussion and conclusions should be enhanced but still generalized. (AND THERE MUST BE A DISCUSSION WITH THE SAME CASE COMPARISON IN SOME LOCATIONS IN THE WORLD)

Answer (3): Thank you for your suggestions. We have included the comparisons with other relevant research(s) worldwide in each sub-chapter of discussions (Please see page 12 line 333; page 13 Line 355 ;page 14 Line 385; page 17 Line 408)

Comment (4) Enhance the literature review in the Introduction and identify research
gaps leading to the present study.

Answer (4): Thank you for your suggestions. We have identified the research gaps with previous research(s) and include it in our manuscript (Please see page 2 line 71)

Comment (5) Enhance the discussion, in terms of the reference list with recent international references.

Answer (5): Thank you for your suggestions. We have included the comparisons with other recent international research(s) in the discussions chapter discussions (Please see page 12 line 333; page 13 Line 355 ;page 14 Line 385; page 17 Line 408)

Comment (6) There are several comments by the reviewers (please download in the IJG system) that need to be carefully answered and appropriate corrections/additions should be made. Also, comments in uploaded files should be addressed.

Answer (6): Yes Thank you, We have answered it according to several comments by the reviewers based on the reviewers answer guide

Furthermore:
- English needs editing to bring it up to publication standards

Answer: We have improved the language based on the publication standard

- Cross check that all references in the list are cited in text and vice versa.

Answer: Thank you, we checked every last references in the text and references

- Carefully check each reference in the list for missing, incomplete or incorrect information (e.g., journal abbreviation, volume No., issue, pp., etc). Format the listed references according to the journal's style.

Answer: Thank you, We checked each reference and formatted it based on APA style

- Check that all tables and figures are cited in the text and are in numerical order.

Answer: Yes Thank you, We have checked that all tables and figures are already cited in the text and are in numerical order.

- Make sure the abstract does NOT exceed 250 words.

Answer: Yes Thank you, We have checked that the abstract does NOT exceed 250 words.

- Some figures contain small characters and may not pass the quality control of the journal. Please improve the figures resolution. Please upgrade all figures (in \* .jpg extension) with a minimum resolution of 300 dpi

Answer: The majority of the low-quality pictures come from Indonesian Map with a large scale. However, due to the quality, we decided to remove the picture and explain everything in text.

-       The abstract should include: a little background, an explicit purpose of the research, a detailed but concise methodology, the results and highlights of the findings and a few statements of comparison with the same case with other places.

Answer: Yes Thank you, We have include some background, an explicit purpose of the research, a detailed but concise methodology, the results and highlights of the findings and a few statements of comparison with the same case with other places. (Please see page 1 abstract)

-       There is very little discussion on this manuscript and not enough for a journal with a Q-3 tier

Answer:

Our appreciation to all reviewers for all the constructive suggestions and input for the improvement of this manuscript. We have made significant revisions to this manuscript. In the discussion section, we have added more comparisons with other relevant and new research(s) worldwide in each sub-chapter in discussions. Additionally, we have also added some discussions regarding the irigation potential in the future and the recommendations for irrigation development in Java. (Please see page 12 line 333; page 13 Line 355; page 14 Line 379 and 385; page 17 Line 399 and 408)

- Also, please STRICTLY follow the guidelines to the authors in formatting the text and tables, the section titles, and the references in the list. See how published papers in this journal look and adjust accordingly.

Answer: Yes Thank you, We have followed this journal guidelines in formatting the text and tables, the section titles, and the references in the list

- Carefully check the revised paper before re-submission.

Answer: Yes Thank you, We have checked it

- There are attachments with comments by the reviewers. These comments should also be addressed.

Answer: Yes Thank you, We have addressed the comments by the reviewers

**2. Response to Reviewer A:**

**Comments\_summary:**

**General Comments:**

This manuscript is very a good result of water resources in Indonesia, mainly in Java islands that will contribute to global issues. There are **7 comments** that need to be revised by the authors. Minor revision before to publish."
**Detail comments:**

Comment #1 In Abstract and also in conclusion, add one conclusion about the comparison between WSs in Java island.

Answer#1: Yes Thank you, We have included a conclusion about the comparison between WSs in Java island. (Please see Page 1 abstract and page 18 conclusion)

Comment #2 In Abstract and also in conclusion, add one conclusion about the relationship between water resources and irrigation need.

Answer#2: Yes Thank you, We have included a conclusion about the relationship between water resources and irrigation water demand (Please see Page 1 abstract and page 18 conclusion)

Comment #3 In Abstract and also in conclusion, add with one scientific suggestion for next irrigation in Java island

Answer#3: Yes Thank you, We have included a suggestion for next irrigation in Java island (Please see Page 1 abstract and page 18 conclusion)

Comment #4 Revise the Indonesian abstract, accordingly

Answer#4: Yes Thank you, We have revised the abstract according to the revision.

Comment #5 and #6: Give two additional subchapters:
1) Comparison between WS-WS
2) Comparison with regional Indonesia and also global results

Answer#5 and #6: Yes Thank you, We have include Comparison between WS-WS and Comparison with regional Indonesia and also global results on each sub chapter (Please see page 12 line 333; page 13 Line 355 ;page 14 Line 379 and 385; page 17 Line 399 and 408)

Comment #7 Revise the conclusion with according #5 and #6

Answer#7: Yes Thank you, We have revised a conclusion according to the revision. (Please see page 18 conclusion)

**2. Response to Reviewer B:**

Comment (1) At the end of Introduction, the objectives of this paper should be clearly stated

Answer (1): Yes Thank you, We have included the objectives of this paper at the end of introduction (Please see page 2 line 74)

Comment (2) Jawa as the study area should be clearly stated here, and then the reason why Java is selected

Answer (2): Yes Thank you, we have included the reason why Java is selected as a study area

 (Please see page 3 line 89)

Comment (3) River gaugig station?

Answer (3): We have revised it into the river gauging station (Please see page 4 line 122)

Comment (4) Mainstay discharge is only locally known in Indonesian paper. A better term is “dependable flow”

Answer (4): We have revised it into “dependable flow” (Please see page 12 line 338)

Comment (5) The more popular term is Domestik Municipal and Industry (DMI)

Answer (5): Yes Thank you, We have revised it into DMI (Please see page 13 line 344)

Comment (6) Please explain the procedure to compute the river basin water demand from the administrative water demand

Answer (6): Yes Thank you, we have included it in the manuscript. The river basins water demand was calculated by adding the irrigation water demand and the cities water demand in the respective river basins. (Please see page 13 line 345)

Comment (7) DMI is more widely known

Answer (7): Yes Thank you, We have revised it into DMI (Please see page 13 line 365)

Comment (8) Please check the decimal point

Answer (8): Yes Thank you, We have checked and fixed it (Please see page 14 line 374)

Comment (9) In what year?

Answer (9): Yes Thank you, water demand pada table describe the average yearly demand (Please see page 16 line 389)

Comment (10) Please elaborate, how much surplus will be in the future! And how the surplus will be utilized? For irrigation or DMI?

Answer (10): Yes Thank you, we have include the amount of water surplus in the future and its recommended utilization in the manuscript (Please see page 17 line 403)

**Comments\_summary:**

The most important part of the paper, the objectives of this paper is not yet clearly stated. This deficiency makes inconsistency in the title, methodology, results, and conclusions.
a) The Title mentioning water balance simulation, while no water balance simulation in the methodology. There is only a simulation of water availability.

Answer (a): The water balance was computed by substracting water availability (computed using WFLOW) and water demand for DMI. Hence, the title of the manuscript has been revised.

b) The Title mentioning "Irrigation Potential" is not clearly defined and discussed.

Answer (b): yes we have revised it into irrigation water demand, the term “potential” refer to water availability for irrigation

**Suggestions:**
1) The suggested title is "Water Balance Supporting the Irrigation Water Demand in the Future in Java Island, Indonesia".

Answer (1): Yes Thank you, we have revised the title. The focus of this research is the irrigation potential in the present, with little discussion for the potential in the future due to the need for more in-depth analysis for the future water demand.

2) Objectives according to the title

Answer (2): Yes Thank you, We have revised the objectives (Please see page 1 abstract and page 2 line 74)

3) Detailed discussion on irrigation potential and its water demand in the future.

Answer (3): Yes Thank you, We added discussion about irrigation potential and its water demand in the future on sub chapter 5.4 Water Balance in Java (Please see page 17 line 403)

4) Relate the water availability with the water demand, and discuss its implication. How to use the surplus of water? For more irrigation field or to satisfy the domestic, municipal, and industry (DMI) water demand?

Answer (4): Thank you. We have included the relation between water availability and water demand on sub chapter 5.4 Water Balance in Java(Please see page 17 line 403)