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RESEARCH ARTICLE

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Guidelines for preparing paper manuscript for the journal of infrastructure and sustainable development

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Abstract: Provides a brief overview of the paper. The abstract should be between 250 and 300 words in length. Use the Abstract style for all abstract text. The abstract needs to concisely summarize the core of the paper, including background, objectives, methods, results, and conclusions. Avoid using abbreviations and citations.

Keywords: Keyword 1; keyword 2; keyword 3; keyword 4; keyword 5

1. GENERAL INFORMATION

1.1 The Manuscript

Authors are required to format their papers appropriately for publication in the journal article. They should strictly adhere to the following instructions when preparing their manuscript. While using MSWord is recommended, it is not mandatory for manuscript preparation.

This document was created using MSWord and should serve as a template if using the same word processor. Each paragraph has a predefined style. Apply the appropriate style to each paragraph as specified. Avoid making local modifications to any paragraph or text, except for mathematical variables or Latin terms. Always select the relevant style name provided in this document for each paragraph. Refer to the Styles bar at the top or on the right side of your screen to find the correct style. The paper's layout should mirror this document.

The paper must be organized into several coherent chapters: 1) Introduction, 2) Methods, 3) Results, 4) Discussion, and 5) Conclusion. It should be written in 6 to 12 pages, including appendices and references, with a total word count of 5000 – 6000 words, excluding references. Add line numbers beside the text throughout the manuscript.

1.2 Page Layout

Use an A4 (210×297 mm) size paper for preparing the paper. Set the left and right margins at 20 mm, top and bottom margins at 20 mm. Use one-column page layout for all section of the paper.

1.3 Font Type, Font Size, and Line Spacing

Use Times New Roman 10 point and single line spacing for body text (Normal style). Use Times New Roman 8 point for the abstract (Abstract style), the keywords (Keyword style), Heading (Heading style), the table captions (Table Caption style), the figure captions (Figure Caption style), and the references (Reference style). Use italics for titles of journals or books, parameters in mathematics except for functions (log, ln, sin, cos, max., d in dx, etc.). Never use the bold typeface, except to denote vectors in mathematics. Never underline any text.

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Never letter spacing and never use more than one space after each word except those added automatically by the document processor. Refrain from leaving the blank line between paragraphs.

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The header and footer are placed at 200 mm from the top and bottom margins, respectively. The header and footer are written in 6 points Arial type font, right aligned, single line spacing, zero spacing before and after the paragraph.

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Authors shall submit their papers through the Online Submission System in Journal of the Civil Engineering Forum portal. Please visit https://journal.itk.ac.id/index.php/JISD/login for further information.

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Apply Title style to the paper's title. This style has everything needed to define the title layout (font type and size, paragraph alignment, spacing). The title shall be 16 points Arial type font, title case (capitalize the first character of each text, except for preposition), Left aligned, single line spacing, 14 point spacing before and after the paragraph

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Type the name of the authors followed by their last name. Group the authors by their affiliation. If there is only one co-author and he/she has the same affiliation with that of the first author, put the word "and" to separate their names.

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Apply Author Affiliation style to the affiliation paragraph. The paragraph should be 8 points Times New Roman type, left aligned, single line spacing, zero spacing before and after the paragraph. Author(s) affiliation should contain the following: department, company/institute/university, city, country (all capital character).

1.8 Abstract

The abstract must consist of 250-300 words. Apply Abstract style to the paragraph. It defines the abstract paragraph as 8 points Times New Roman type, justified alignment, single line spacing, 6 points spacing before and 6 points spacing after the paragraph.

1.9 Keywords

Write 5 keywords separated by a semicolon (;). Apply Keyword style to the paragraph. It defines the keywords paragraph as 8 points Times New Roman type, left aligned, single line spacing, zero spacing before and after the paragraph.

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Use of two ranks of heading is preferable for the chapter and section. Apply Heading 1 and Heading 2 styles for the chapter and section headings, respectively. You may add a sub-section to have three ranks of heading and apply Heading 3 for this sub-section. Headings shall be kept with the paragraph that immediately follows.

The chapter heading is written in 11 points Arial, 6 points spacing before and 6 points spacing after the paragraph. By applying Heading 1 style, all capitals character and an automatic numbering will be given to the chapter heading. The chapter heading is automatically kept with the paragraph that immediately follows.

The section heading is written in 11 points Arial type font, single line spacing, 4 points spacing before and 4 points spacing after the paragraph. By applying Heading 2 style, an automatic numbering will be given to the section heading. The section heading is automatically kept with the paragraph that immediately follows.

It is strongly recommended to organize the paper in chapters and sections. In rare cases, the paper may have sub-section. However, the author should try to avoid having sub-section in his/her paper. The paragraph below is an example of a sub-section heading.

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1.10.1 This is a sub-section heading

The sub-section heading should be formatted in 11-point roman type font with single line spacing, 4 points of space before, and no space after the paragraph. When the Heading 3 style is applied, automatic numbering will be assigned to the sub-section heading.

1.11 Text

Apply Normal style to paragraphs of the text. It defines the paragraphs to be 11 points Times New Roman font, justified alignment, single line spacing, zero-point spacing before and 10 points spacing after the paragraph. Do not use blank paragraphs to get spacing between consecutive paragraphs.

You may activate line hyphenation. This gives a better paragraph format, but you will have to be careful that the sentence is hyphenated correctly.

Do not locally modify paragraph except to write mathematical parameters or symbols, Latin words, titles of journals or books.

a) Use numbering format to write lists.
b) Use this type of numbering.
c) It is done by applying paragraph numbering format that is available in MSWord.
d) Do not indent the list.

Numerals of five or more digits are grouped in three-digit blocks by spaces or commas, e.g. 10,000. Do not do that for numerals of four or fewer digits, e.g. 9000. Decimals are expressed by point, e.g. 3.141592654 or 3.141 592 654. Pay attention not to line break numerals. To keep space-separated words on the same line, use non-hyphenated space. Press SPACEBAR while pressing CONTROL+SHIFT keys, i.e. press together the spacebar, control, and shift keys, to insert this non-hyphenated space.

Use SI unit or its derivatives to denote units.

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Use equation editor for special high-quality fonts for all mathematical equations in the text (*MathType* word plugin is suggested to be used). Italic type font shall be used as variable except for Greek symbols. Type *f* but Φ for variables. Roman type font shall be used as a function, e.g. sin, exp, log, d in d*x*, ∂ in ∂*x*. Do not type *d* when you mean differential. You may have d*d*/d*x* to express differential of *d* with respect to *x*. Do not use italic type font for the unit. Type s instead of *s* for time unit in second. Type *s* for variable *s*, which you may define for distance. Type C for degree unit in Celsius, but type *C* for a variable that you may define for concentration for example.

Use bold characters to denote matrix or vector variables.

Use an appropriate symbol for degree, which you may get by inserting degree sign from Symbol toolbar available in MSWord, for example 28°C. Do not use superscripted o for degree sign. Use multiplication sign × instead of x for multiplication.

Give the definition of variables below the equation where they appear for the first time.

The equation is written inside double column table (left column for equation and right column for equation number) paragraph is left-aligned, single line spacing, zero-point spacing before and 6 points spacing after the paragraph, do not add space between equation paragraphs. Apply Equation style to define the equation paragraph.

Number consecutively the equations according to their order of appearance. Place the number in right column. Refer equations by these numbers. Equation (1) and Equation (2) are examples of putting equations in the text.

$$\frac{\partial A}{\partial t}+\frac{\partial Q}{\partial x}-q_{\ell}=0 \tag{1}$$

where A is the cross-sectional area of flow, Q is the discharge, q_ℓ is the lateral flow per unit length of the channel, t is the time, and x is the distance along the channel.

$$\frac{\mathrm{d}u\phi}{\mathrm{d}x}-\frac{\mathrm{d}}{\mathrm{d}x}\left(\Gamma\frac{\mathrm{d}\phi}{\mathrm{d}x}\right)=R \tag{2}$$

where u is the flow velocity, Φ is a scalar variable, Γ is the diffusion coefficient, R is the source, and x is the distance along the flow.

1.13 Tables

Tables should be located close to the first reference to them in the text and number them consecutively. Explanations should be given at the foot of the table, not within the table itself. Use only horizontal rules: One above and one below the column headings and one at the foot of the table. Tables are written in 11 points Times New Roman type font. You may use a smaller font size (9 points) in tables. The table should fit within a paper width (less than 170 mm).

Apply Table Text style to all table texts and column headings. Align column headings to the left of their column and start these headings with an initial capital. Column headings are vertically centered, single line spacing. Align all table texts to the left of their column and to the top of their row. Table texts are single line spacing, zero-point spacing before and after the paragraph.

Type table's caption above the table. Use 10 points Arial font, left aligned, single line spacing, 6 points spacing before and 4 points spacing after the paragraph, keep together with the table. Do not put a full stop (".") at the end of the caption. Apply Table Caption style to the table caption. See for example Table 1.

The table should fit within the type area width of 170 mm. Table 2 shows an example of wide table placement.

Table 1. Names of styles used in the paper

Styles	Uses
Abstract	Abstract
Author	Authors
Author Affiliation	Authors' affiliation
Equation	Equations
Figure	Figures
Figure Caption	Caption of figures
Footer	Footer
Header	Header
Heading 1	Chapter heading
Heading 2	Section heading
Heading 3	Sub-section heading
Heading Not-numbered	Heading for acknowledgment, references, appendices
Keyword	Keywords
List Paragraph	Numbered lists
Normal	Text
Strong	Heading of the abstract and of the Keywords
Table Caption	Caption of tables
Table Text	Texts in tables
Title	Title of the paper

1.14 Figures

Figures should be located close to the first reference to them in the text and number them consecutively. Do not make a distinction between photographs and diagrams. Figures should fit within the type area width of 170 mm. Figures should have the minimum resolution of 300 dpi. The maximum number of Figures is limited to eight figures.

It is preferable to format figures as a picture. When figures are edited directly in the text, place them in a drawing canvas. Do not place drawing objects on spaces created by inserting blank lines.

Set the wrapping style of figures to "in line with text". You find this option by right-clicking the drawing canvas or the figure, select format figures or drawing canvas, and select the appropriate wrapping style on the window that appears.

Apply Figure style to the figure paragraph. This ensures that figures will have correct spacing between paragraphs. Place the figure caption underneath the figure. Apply Figure Caption style to the figure caption. The caption is written in 11 points Times New Roman type font, left aligned, single line spacing, 0 point spacing before and 6 points spacing

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after the paragraph. Put a full stop (“.”) at the end of the caption. Figure 1 gives an example of figure pasted from a jpg file, whereas Figure 2 is an example of figure made by inserting shapes directly on a drawing canvas.

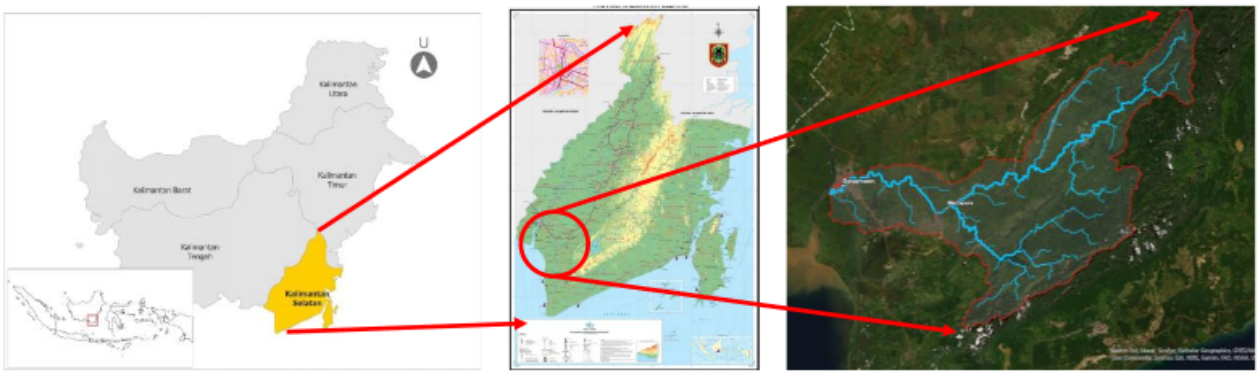


Figure 1. Example of figure. It has to fit within type area width of 170 mm.

2. INTRODUCTION

The introduction should include the study's background, state of the art, gap analysis, and the study's objective. The background section, consisting of one or two paragraphs, explains the rationale behind conducting the study. The state of the art involves a review of the literature, highlighting knowledge gaps among existing studies, and should guide the identification of the study's novelty. The gap analysis outlines findings from the state of the art and explains why the study is necessary, emphasizing that the research has not been conducted elsewhere before. The final paragraph should present the study's objective, derived from the gap analysis, and conclude by mentioning the potential contribution of the study to the existing literature or current context. Adding new sub-sections within the introduction is not permitted.

3. METHOD

The methods section is a critical part of any research paper, as it details the procedures followed to address the research question. This section should clearly describe what was done, how it was done, the reasoning behind the chosen experimental design, and the process of analyzing the results. Scientific writing in the methods section is typically straightforward and systematic, often employing the simple past tense to recount the steps taken during the study. Passive voice is frequently used to focus on the actions rather than the researcher. For example, "Total phosphorus (TP) and total nitrogen (TN) were measured in the laboratory using standard procedures."

In the methods section, it is essential to outline the type of research conducted, including the nature of the data, how the data was collected or selected, and the specific analysis methods used. It is also important to mention any tools, instruments, or materials utilized during the research. Justification for the chosen methods should be provided, supported by appropriate references, to demonstrate their validity and relevance to the study. This detailed explanation allows readers to understand the methodology and assess the reliability and accuracy of the research findings. Additionally, providing sufficient details ensures that the study can be replicated in future research.

4. RESULTS

The results section of a research paper is dedicated solely to presenting the findings of the study, without introducing any interpretation or bias. This section should provide a clear and concise presentation of the data collected, which may be displayed in tables, charts, graphs, and other visual formats. These visual elements can be integrated into the research text or placed on separate pages, depending on what best supports the clarity of the information. Alongside these figures, the results section should include a contextual analysis that explains the significance of the data in sentence form. This analysis should maintain an objective tone, merely stating the findings as they are, and arranging them in a logical and coherent sequence.

The majority of the sentences in this section will be written in the past tense, reflecting the completed nature of the research. Some sentences may use the present tense to describe the current state of the data or its implications. It is rare to use the future tense in the results section, as this part of the paper focuses on what has already been discovered. By

adhering to these guidelines, the results section ensures that readers can easily understand and interpret the study's outcomes, setting the stage for the subsequent discussion and interpretation.

4. CONCLUSION

The conclusion should be succinctly presented in a single paragraph, encapsulating the entire paper while clearly articulating its primary purpose. In the conclusion, it is essential to restate the hypothesis or research question, providing a brief summary of the key findings that emerged from the study. Additionally, the conclusion should highlight the study's contribution to the existing body of literature, emphasizing its significance. It is also important to acknowledge any limitations encountered during the research, as this transparency adds to the study's credibility. Finally, the conclusion should suggest future research directions or offer recommendations based on the study's outcomes, guiding subsequent work in the field.

DISCLAIMER

The authors declare no conflict of interest.

ACKNOWLEDGEMENTS

You may place your acknowledgments here. Write only essential acknowledgments.

REFERENCES

Every text citation must be listed under the heading "References" at the end of the text. All the references (**minimum 15 references**) used in the article must be listed in this part. In this part, all the used references must be taken from primary sources (scientific journals articles). The numbers of journal articles **at least 50% of all the references and published in the last ten years**. Apply Heading Not-numbered style to the heading of this reference. The reference must be in **American Psychological Association 7th Edition (APA 7th Edition)** and listed in alphabetical order, by surname of the first author followed by initials. All the cited references in the article taken from the other author articles should attach the reference sources. The references should use reference application management such as Mendeley (more suggested) , EndNote, or Zotero. Reference application management enables you to deposit any research data (including raw and processed data, video, code, software, algorithms, protocols, and methods) associated with your manuscript in a free-to-use, open access repository. Please include the DOI of the deposited dataset(s) in your main manuscript file.

References by the same single author are ordered by date, from oldest to most recent. References by more than one author with the same first author are ordered after all references by the first author alone, by surname of the second author, or if they are the same, the third author, and so on. References by the same author with the same date are arranged alphabetically by title excluding 'A' or 'The', unless they are parts of a series, in which case order them by part number. Put a lower-case letter after the year: Sukmara (2021a). Sukmara (2021b). Below are examples of how to write references:

Website

Invest Taipei Office. (2021). *Summary of Current Economic Dynamics*. https://invest.taipei/pages/E_SummaryofCurrentEconomicDynamics.html?1653377932

OECD. (2022). *Economic Outlook for Southeast Asia, China and India 2022: Financing Sustainable Recovery from COVID-19*. OECD Publishing. https://doi.org/10.1787/9923f986-en

Book

MoNDP. (2005). *Indonesia: Preliminary Damage and Loss Assessment. The December 26, 2004 Natural Disaster*. Ministry of National Development Planning/National Development Planning Agency (Bappenas). https://www.gfdrr.org/sites/default/files/publication/Indonesia-Preliminary Notes on Reconstruction.pdf

Stephenson, D. (2003). *Water Resources Management*. A. A. Balkema Publishers.

Proceeding

Irham, M., Suri, R., Setiawan, I., & Fuadi, A. (2021). Spatial analysis of accretion, abrasion and shoreline change in banda aceh costal area. *IOP Conference Series: Earth and Environmental Science*, *674*(1). https://doi.org/10.1088/1755-1315/674/1/012046

Ohsumi, T., & Gejo, T. (2005). Field Investigation on the Damage of Road and Infrastructure Caused By the Tsunami in Meulaboh, Aceh, Indonesia. *Proceedings of the JSCE Earthquake Engineering Symposium*, *28*, 1–8. https://doi.org/https://doi.org/10.11532/proee2005a.28.110

Doctoral Dissertation or Master's Thesis

Sukmara, R. B. (2015). *Analisa Penanggulangan Banjir Sungai Karang Mumus Samarinda* [Master's Thesis, Institut Teknologi Sepuluh Nopember (ITS) Surabaya]. https://repository.its.ac.id/62819/1/3113205005-Master-Theses.pdf

Kim, J. (2023). *A Framework for Optimal Reservoir Operation to Improve Downstream Aquatic Environment: Application to Nakdong River Basin in South Korea*. Doctoral Dissertation, Delft University of Technology.

Journal Article

Dalezios, N. R., Blanta, A., Spyropoulos, N. V., & Tarquis, A. M. (2014). Risk identification of agricultural drought for sustainable Agroecosystems. *Natural Hazards and Earth System Sciences*, *14*(9), 2435–2448. https://doi.org/10.5194/nhess-14-2435-2014

Hidayat, R., Sutanto, S. J., Hidayah, A., Ridwan, B., & Mulyana, A. (2019). Development of a landslide early warning system in Indonesia. *Geosciences*, *9*(10), 1–17. https://doi.org/10.3390/geosciences9100451

Report

UNESCO. (2022). Groundewater: Making the Invisible Visible. In *The United Nations World Water Development Report 2022*. UNESCO World Water Assessment Programme & UN-Habitat.

Hayes, D. . C., & Young, R. L. (2005). Comparison of Peak Discharge and Runoff Characteristic Estimates from the Rational Method to Field Observations for Small Basins in Central Virginia. In *USGS Scientific Investigations Report 2005-5254, U. S. Geological Survey*. United States of Geological Survey (USGS). https://pubs.usgs.gov/sir/2005/5254/

APPENDICES

Appendix (es) can be included here if necessary. If there are two or more appendices, use the headings as Appendix 1, Appendix 2.