

COVER LETTER

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[August 13th 2021]

Dear,

I wish to submit an original research article entitled “[The Linkage Of Water Quality Measurement In The Downstream of The Citarum Cascade Reservoir Management]” for consideration by SINERGI.

I confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

I confirm that we will continue to follow and carry out the process of this article in accordance with the provisions and are willing to accept penalties for not implementing them.

In this paper, I/we report on / show that:

Topic	:	Reservoir management
Brief Background	:	The Jatiluhur (the downstream of Citarum Cascade Reservoir) is a multipurpose reservoir, which is used as a Hydroelectric Power Plant (PLTA), the source material for drinking water, flood control, and irrigation, has begun to experience a decrease in environmental carrying capacity and reservoir function, which has been a major proponent of 80% of the raw water to Jakarta at 16,5 m ³ /second. Considering the various factors that previously mentioned which greatly influence the performance of the reservoir in supporting the livelihoods of the people in the surrounding area, a conceptual model of the Citarum Cascade Reservoir management is needed to achieve sustainable use of water resources.
Research Problem	:	The Allocation of the raw water discharge (apart of the reservoir management) for the Citarum Cascade Reservoir is decreasing and also the water quality, where an indication of heavy metal pollution was found in Citarum cascade and exceeds the drinking water quality standard threshold.
Overview of Method	:	Analysis of river discharge is often associated with the

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	<p>level of dependability of water availability uses the Weibull method (calculating 80% probability for R5 plan discharge, and 95% probability for R20 plan discharge). The measuring instrument is used to measure water quality, both directly in the field and analysis in the laboratory. Measuring instruments used to consist of Global Positioning System (GPS), Thermometers, Secchi Discs, Water Samplers, pH Meters, TDS Meters, DO Meters, Plankton Net, and Conductivity Meters. Measurement of heavy metal concentrations in water samples was carried out using concentrated acid extraction and spectrophotometry with the Atomic Absorption Spectrophotometry (AAS). The statistics are used to analyze the relationship of water quality parameters in the Citarum Cascade Reservoir with parameters of the quantity of water in the reservoir. The statistical test used in analyzing the relationship is used discriminant test and factor analysis which is included in the type of multivariate statistics.</p>
<p>Significant finding</p>	<p>: The results of the allocation of drinking water availability calculations in the Citarum Cascade Reservoir are 59.02 m³/sec which can be used as a drinking water debit in the DKI Jakarta and surrounding areas. Some quality parameters: COD, BOD, and Pb parameters, have exceeded the drinking water quality standard set by the Indonesian Ministry of health. The waters of the Citarum Cascade Reservoir have been polluted by organic matter that is easily biodegradable and unfit for use as a source of raw water for drinking water. Physical, chemical, and biological treatment are needed if it will be used as a source of drinking water. Statistical test results with a factor analysis show that the discharge variable as a quantitative aspect has a close relationship with the organic parameters of water quality, i.e. BOD and COD in the Citarum Cascade Reservoir.</p>

We have no conflicts of interest to disclose.

Thank you for your consideration of this manuscript.

Sincerely,



[*Lieza Corsita*]

AUTHORSHIP STATEMENT

I/We wish to submit an original research article entitled “[*The Linkage Of Water Quality Measurement In The Downstream of The Citarum Cascade Reservoir Management*]” for consideration by SINERGI.

All persons who meet authorship criteria are listed as authors, and all authors certify that they have participated sufficiently in work to take public responsibility for the content, including participation in the concept, design, analysis, writing, or revision of the manuscript.

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