

# Evaluation of Peatland Suitability for Rice Cultivation using Matching Method

Juhriyansyah Dalle <sup>1</sup> Dwi Hastuti <sup>2</sup> Firdaus Akmal <sup>1</sup>

Pol. J. Environ. Stud. 2021;30(3):2041–2047;  
DOI: <https://doi.org/10.15244/pjoes/127420>

## KEYWORDS

[land evaluation](#), [land evaluation web system](#), [web-based matching](#)

## TOPICS

[Water monitoring](#), [Sustainable development](#)

## ABSTRACT

One of the common problems with peatlands is the infertile nature of the soil, therefore, farmers need to possess adequate knowledge on land evaluation techniques within a limited period to grow crops in this region optimally. Therefore, this research aims to design and build a computerized system to evaluate the suitability of land for rice cultivation by using the matching method based on FAO guidelines. This study develops a web application that enables users to store the various characteristics of the land and easily output suitable information with limiting factors. A total of 14 data inputs with 22 land characteristics parameters were used in the system trial phase. The result showed that the system testing results when compared with the manual calculations, obtained a 92.86% level of accuracy. Therefore, further research is needed on the use of the application on land suitability evaluation for growing other types of crops apart from lowland rice. In addition, the input parameters can be adjusted based on future land suitability evaluations, with the system developed to evaluate the criteria and pave the way for future research development in the field.