Ocean Science
Discussions

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EGU

Interactive comment on "Improved Spectral Angle Mapper applications for mangrove classification using SPOT5 imagery" *by* Xiu Su et al.

Anonymous Referee #1

Received and published: 3 September 2019

This paper proposed an improve SAM method to classify mangrove using SPOT5 imagery. The paper has certain value and significance for the mangroves classification using remote sensing technology, but there are also obvious deficiencies. The most prominent problem is the innovation and applicability of the proposed method. It is hard to assess the innovation of the proposed method. Here are some suggestions for the author to improve the paper.

Introduction

More recent literatures are needed. This paper aims to improve the SAM method with some new algorithm. However, the most recent literatures the authors reviewed were published in 2006. The reads have no idea what happened in the last ten years, which makes it difficult to judge the innovation of this paper. In addition, the number of

references is not enough. Please add more recent literatures in the last 5 years about the SAM method, object-oriented classification and watershed image segmentation algorithm. Please state the application and limitation of the previous research. Is there similar research before? What's the innovation of this paper?

P3 – line 6-8, P4 – line 5-6, P4 – line 8-9, P4 – line 18-19. More recent literatures are needed.

P4 – line 5-6. There is a lack of detailed literature on mangrove extraction methods.

Method

This paper lacks a detailed explanations of the process and the author should make more explanations why you choose this flow. The parameters of the key flow were lack. Therefore, this method is hard to repeat by readers.

P6 – line 18-19. Please explain why use the Pixel Purity Index (PPI) and MNF method. Since SPOT5 imagery has only 4 bands, is the principal component analysis method necessary?

P6 – line 13-14. Is the trapezoidal high-pass filtering a new method?

P9. The author collects field control points and survey spectra, but there is no specific point description information or location map.

P11. The image processing flow should be geometrically corrected and then atmospherically corrected.

P6 – line 12-13. What is the classification criteria of the mangrove category?

Result

This MS contains only one graph to show the results of mangrove classification (Figure 9). Since the study area is very large, it is better to show the detailed map of mangrove's distribution and patterns. In addition, this section lacks a detail descriptions of

the classification result. Moreover, the comparison of improved SAM and traditional method is necessary, in order to show the advantages of the "improved" method.

Discussion

This paper lacks a discussion section to discuss the applicability and disadvantages of the proposed method.

Reference

The references (P18, Line 2-11) are not right Aligned.

The comma in the reference is not correct. For example, P19, Line 10.

Authors' given name in the references were not in a uniform format. Some are listed with the initials, while some were listed with the full name, e.g. Wang HY (No. 20), and Weng Qiang (No. 21).

Language

The quality of the English is not up to standard. Please find a native English speaker to assist in refining the text. Please check the use of space throughout the paper. For example, there should be an extra space between a word and the following left-half bracket, between the number and unit, as well as between a comma and the next letter.

P1 – line 4 and 6. Why are there dots in the name of your organization "National. Marine Environmental. Monitoring Center"? I think they should be deleted.

P2 – line 14. There are two dots at the end of the sentence. One should be deleted.

P3 – line 13, 18, 19, etc. Please check the reference format of text citations throughout the paper, especially pay attention to the use of space.

P4 – line 6. "also may also", the first "also" should be deleted.

P5 – line 8-10. Please rewrite this sentence.

Interactive comment

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Discussion paper

P5 – line 13, 19, etc. A dot is missing between "Fig" and 2. And a space is missing before (Fig.2) and (Fig.3). Please check such small errors throughout the paper.

P6 – line 8. One needless comma symbol should be deleted.

P6 – line 20. The usage of single quotes should be double quotes, to be consistence with the other double quotes.

Interactive comment on Ocean Sci. Discuss., https://doi.org/10.5194/os-2019-13, 2019.