Abstract

This study introduced an object-oriented approach to flood mapping and affected field estimation in central Cambodia. Traditional pixel-based image algorithms for flood mapping and land use and land cover classification endure from low accuracy, sub-pixel problems, and the cover noise effect in the resulting images. On the other hand, the object-based image analysis (OBIA) approach has been thoroughly developed in the last two decades to overcome the limitations and disadvantages of the traditional pixel-based approaches by generating and analyzing meaningful image objects instead of individual pixels and reducing the speckle noise effect. The OBIA approach was applied for the image classification with a new improved estimation algorithm with multi scale parameter in the segmentation process to obtain more accurate results in the flood mapping. Flooding can be recognized using a variety of approaches such as statistics, ground-based measuring, prediction model, remote sensing techniques.
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**Index Terms**

Computer Science

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**Keywords**
Change Detection  Classification  Flood Mapping  Object-Based Approach
Segmentation