UAV applications in Coastal studies: A thematic review

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Abstract

The application of Unmanned Aerial Vehicle (UAV) provides higher spatio-temporal data for the research activities. It is a thriving method in coastal studies which are subject to frequent modification due to natural and man-made factors viz. wave and tidal actions as well as the marine infrastructure development. The application of the UAV provides significant contribution to the decision-making process of coastal management and planning by providing frequently changing coastal environment and with high spatio-temporal resolution imagery. Therefore, this study is to review the applicability of the UAV data in coastal researches by collecting published researches from various reputed databases executing the systematic literature review. Accordingly, the findings reflect that the UAV is a blooming method which is widely applied in the coastal studies where the other Remote Sensing (RS) platforms i.e. satellite imagery provides limited features in terms of spatio-temporal aspects and so does limit the researches in multifaceted ways. Also, the low-cost and user-friendly feature of UAV supports the researchers to collect the data whenever they want the high spatio-temporal resolution data. The study concludes that the UVA applications in rapidly increasing method in coastal studies which would engulf the research opportunism in future too.

Keywords: UAV, wave, tidal, coastal management, systematic literature review.