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Exploring Spratly Islands using VIIRS Boat Detection Satellite Image Analytics

We provide a method for evaluating the feasibility of monitoring or estimating island activities carried out by dredgers and support boats in the Spratly Islands region using VIIRS Boat Detection data, salient to other countries having their claims, especially the Philippines. From 2012 to 2020, an annual summary grid for VIIRS Boat Detection was utilized to compare the number of VBD detections and their average radiance with remote sensing satellite photos in Spratly. This article described the temporal history of detected light from boats between 2015 and 2020, demonstrating an increase in brightness and a rise in the number of boats identified. Satellite photographs collected by the GeoEye-1 satellite revealed an increase in the number of dredging vessels on several islands, including Mischief Reef, Fiery Cross Reef, and Subi Reef. The increase in light reported from boats in the Spratlys and the developed reclaimed islands occurs at the same time. Indicating a forced dominance of the maritime sovereignty and non-obedience to the United Nations Convention on the Law of the Sea (UNCLOS). This study could also be used for policy-making on the borders of the Philippines.

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