

# **Kelestarian terumbu karang pada wisata bahari di Desa Bangsring Banyuwangi Jawa Timur = Coral reef conservation in marine tourism in Bangsring Village Banyuwangi, East Java Java**

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## **Abstrak**

Terumbu karang merupakan ekosistem yang memiliki keindahan yang unik dan biodiversitas yang tinggi. Ekosistem terumbu karang merupakan ekosistem yang sensitif terhadap ancaman lingkungan dan ancaman antropogenik. Keunikan terumbu karang dapat menjadi salah satu atraksi wisata yang menarik. Namun dengan adanya aktivitas wisata perlu dilakukan upaya-upaya pelestarian agar ekosistem terumbu karang tetap terjaga. Penelitian ini bertujuan untuk menganalisis secara spasial kelestarian terumbu karang berdasarkan perubahan tutupan terumbu karang dan kondisi perairan pada tahun 2008-2020 serta pengaruh pengelolaan wisata bahari dan aktivitas manusia terhadap kelestarian terumbu karang di Desa Bangsring. Perubahan tutupan terumbu karang dan kondisi perairan di Desa Bangsring diperoleh melalui pengolahan data Citra Landsat 7 ETM+ dan Citra Landsat 8 OLI TIRS tahun 2008-2020 serta pengukuran secara in-situ. Pengambilan data pengelolaan wisata bahari dan aktivitas manusia dilakukan dengan observasi dan wawancara. Pengolahan data dilakukan dengan metode skoring dan overlay pada seluruh variabel. Analisis data pada penelitian ini menggunakan analisis spasial, analisis deskriptif dan analisis statistik. Hasil penelitian menunjukkan bahwa kelestarian terumbu karang di Desa Bangsring berdasarkan perubahan tutupan terumbu karang hidup secara keseluruhan mengalami peningkatan dari tahun 2008-2020. Luasan terumbu karang hidup terbesar terdapat di wisata Bangsring Underwater yaitu sebesar 1,1 ha (2008), 1,5 ha (2014), dan 3,1 ha (2020). Wisata Mutiara Pulau Tabuhan luas tutupan terumbu karang hidup sebesar 0,2 ha (2008), 0,2 ha (2014), dan 0,3 ha (2020). Pada wisata Grand Watu Dodol luas tutupan terumbu karang hidup sebesar 0,1 ha (2008), 0,2 ha (2014), dan 0,4 ha (2020). Kondisi perairan dari ketiga wisata bahari memiliki nilai suhu dan salinitas hampir sama. Berdasarkan perhitungan ODTWA wisata Bangsring Underwater dan Grand Watu Dodol layak dikembangkan sedangkan wisata Mutiara Pulau Tabuhan belum layak dikembangkan. Berdasarkan kelestarian terumbu karang di ketiga wisata bahari, pengelolaan wisata berbasis ekowisata seperti yang dilakukan wisata Bangsring Underwater memiliki pengaruh terhadap pertumbuhan terumbu karang hidup dibandingkan pengelolaan wisata bahari yang tidak berbasis ekowisata seperti wisata Mutiara Pulau Tabuhan dan Grand Watu Dodol. Hasil korelasi R<sup>2</sup> antara suhu dan pengelolaan wisata bahari terhadap perubahan luas terumbu karang hidup sebesar 33,72% dan 46,02%.

.....Coral reefs are ecosystems that have unique beauty and high biodiversity. Coral reef ecosystems are ecosystems that are sensitive to environmental threats and anthropogenic threats. The uniqueness of coral reefs can be one of the attractive tourist attractions. However, with the existence of tourism activities, conservation efforts need to be made so that the coral reef ecosystem is maintained. This study aims to spatially analyze the sustainability of coral reefs based on changes in coral reef cover and water conditions in 2008-2020 as well as the influence of marine tourism management and human activities on the preservation of coral reefs in Bangsring Village. Changes in coral reef cover and water conditions in Bangsring Village were obtained through data processing of Landsat 7 ETM+ and Landsat 8 OLI TIRS images for 2008-2020 as well as in-situ measurements. Data collection on marine tourism management and

human activities was carried out by observation and interviews. Data processing is done by scoring and overlaying all variables. Data analysis in this study used spatial analysis, descriptive analysis and statistical analysis. The results showed that the sustainability of coral reefs in Bangsring Village based on changes in live coral cover overall increased from 2008-2020. The largest living coral reef area is found in Bangsring Underwater tourism, which is 1.1 ha (2008), 1.5 ha (2014), and 3.1 ha (2020). Mutiara Tourism Tabuhan Island has an area of 0.2 ha of live coral reefs (2008), 0.2 ha (2014), and 0.3 ha (2020). In the Grand Watu Dodol tour, the area of live coral reef cover is 0.1 ha (2008), 0.2 ha (2014), and 0.4 ha (2020). The water conditions of the three marine tourism have almost the same temperature and salinity values. Based on ODTWA calculations, Bangsring Underwater and Grand Watu Dodol tourism are feasible to develop, while Mutiara Tabuhan Island tourism is not feasible to develop. Based on the preservation of coral reefs in the three marine tourism, the management of ecotourism-based tourism such as the Bangsring Underwater tour has an influence on the growth of live coral reefs compared to the management of marine tourism that is not based on ecotourism, such as Mutiara Pulau Tabuhan tourism and Grand Watu Dodol. The results of the R<sup>2</sup> correlation between temperature and marine tourism management on changes in the area of live coral reefs were 33.72% and 46.02%, respectively.