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Hydroacoustic mapping of geogenic reefs, a matter of technique: a practical example from the Baltic Sea

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Geogenic reefs are hotspots for benthic organisms including fish. Given their ecosystem importance, the European Union has protected them by law and demands an area-wide mapping. The German federal agency for nature conservation together with scientific experts has lately published a guideline to map reefs in the Baltic Sea. Reef delineation is based on hydroacoustic backscatter mosaics which are divided and interpreted in 50x50 m cells. Each cell is categorized according to the number of boulders present: none, 1-5, and more than 5 boulders. The categorization is strongly dependent on the data quality, hydroacoustic frequency used and technique of boulder identification (manual or automatic). By comparing data with different frequencies interpreted each manually and automatically we will demonstrate the importance of appropriate data for reef delineation.