



Bathymetric mapping in Penghu shallow waters using satellite imagery : the application of environment interpretation on fishing weir

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The distribution and width of shore platform in Penghu islands is varied. . The well developed shore platforms which could reach 3 to 5 km at lowest tide fringe Penghu, Jongtun, Baisha and Shiyu Island. However, the NE-wider, SW-narrower and wider in sheltered area distribution of shore platform in research area is quiet obvious. Owing to the difference of tidal environment , the way locals make use of coast is varied. Tidal weir is one of the most important culture heritages and estimation of fishing weir history in Penghu is about 300 years, the amount of tidal weir is 574, especially in Chipei area. The main purpose of this research is to recognize the relationship between shore platform and fishing weir by investigating the style and distribution of fishing weir with environmental condition, such as water depth, the material above shore platform, the slope of shore platform and tidal direction. According to the preliminary result, the morphology of shore platform have influence on the distribution of fishing weir. In the this study, we applied water depth derived from satellite images to analyze the relationship between the style of fishing weir and shore platform.

Keywords: Fishing Weir, Kernel Density Estimation, Bathymetric Mapping