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Investigation of water disturbance by out board motors in coastal river

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Abstrak

This project is motivated from environmental degradation and pollution problems caused by the outboard motors. Environmental and safety constraints are an increasingly necessity which enforces the demand for new technologies and development. Therefore, this research aims to provide velocity field data correlated to water quality measurements taken during the field tests and used to establish the effect from the outboard motor. Acoustic Doppler Velocimeter (ADV) is widely used for field measurement of two and three dimensional water velocity. The implementation of the ADV measurement technique is accomplished by measuring the phase change in the acoustic signal reflected of the scattering particles in the flow, than by looking at the data that the ADV gave I?ll be using a lot of statistical method in order to identify the outboard velocity signature, the are 9 statistical method that I?m going to use which is: One second average of mean velocity One second average of standard deviation One second average of resultant velocity One second average of skewness One second average of kurtosis One second average of angle of resultant velocity make with x axis Wavelet FFT One second average of Backscatter Intensity (BSI) After using all of the statistical analysis mention above, than I will identify the best statistical method in order to identify the outboard velocity signature. Further analysis will be done by looking at the changing value of mean velocity and backscatter intensity, this than will help to identify the behaviour of different types of outboard motor that used in this research.