Analisis Probabilitas Kecepatan Angin untuk Pesisir Cilacap dengan Menerapkan Distribusi Weibull dan Rayleigh

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Abstract	Wind characteristics especially the event probability have been more studied in the relation to wind energy availability inÃ‚Â an area. Nevertheless, in the relation to coastal structure, it is still rare to be unveiled in a paper particulary in Indonesia. In thisÃ‚Â article, therefore, it is studied probability distribution commonly used to wind energy analysis i.e. Weibull and Rayleigh distribution.Ã‚Â The distribution is applied to analyze wind data in Cilacap Coast. Wind data analyzed is from Board of Meteorology, ClimatologyÃ‚Â and Geophysics, Cilacap branch, along two years (2009 Ã¢Â€Â“ 2011). Mean, varians and standard deviation are founded to calculate shapeÃ‚Â factor (k) and scale factor (c) which must be available to arrange distribution function of Weibull and Rayleigh. In the region, it gainsÃ‚Â a result that wind speed probabilities follow Weibull and Rayleigh function fairly. Shape parameter value has been gotten k = 3,26,Ã‚Â while scale parameter has been gotten respectively c = 3,64 for Weibull and Cr = 2,44 for Rayleigh. Value of k Ã¢Â‰Â¥ 3 indicates the regionÃ‚Â has regular and steady wind. Besides, mean speed of wind is 3,3 m/s.
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