

## عنوان مقاله:

On Wind Speed and its Distribution Pattern: A Case Study of Some Selected Cities in Delta State, Nigeria

## محل انتشار:

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## خلاصه مقاله:

Wind is a significant weather variable and its study has gained convincing attention recently due to its increasing importance as a source of renewable energy as well as its role in various natural phenomena like erosion, precipitation, and spread of wildfires. This paper investigates wind speed distribution in Delta State, Nigeria using a nonparametric statistical technique for ten consecutive years spanning from ۲۰۱۱ to ۲۰۲۰ across three stations. The nonparametric statistical approach is the kernel density estimation with focus on Gaussian kernel estimator. The results of the investigated period revealed that wind speed in Asaba that is located in Delta North is higher in comparison with the wind speed in Patani which is situated in Southern region of the State while the wind speed is low at Sapele in Delta Central. Therefore, installation of wind power generation system is more profiting in the Northern part because the amount of wind energy generated is determine by the wind speed. Again, the performance of agricultural or industrial activities that depend on wind speed for their proper execution is optimum in ۲۰۱۸ while the .least performances were recorded in ۲۰۱۵ and ۲۰۱۶ respectively for the period explored

## کلمات کلیدی:

Climate, Energy, Environment, kernel, wind speed

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