Sea breeze analysis on LES simulations and the particle trace calculations in MM21 district

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We have performed thermal and wind environment LES simulations in MM21 district in Yokohama. The used simulation model is MSSG (Multi-Scale Simulator for the Geo-environment). The spatial resolution is about 5m in horizontal and vertical axis. We have also performed the particle trace analysis in order to investigate the route of the sea-breeze. We have found the cool wind is gradually warmed up as flowing into the district, then it blows up and is diffused. We will discuss the diffusion coefficient in comparison with the several cases of vegetation and the DHC (District Heating & Cooling) system in the area.

Keywords: Thermal and wind environment simulation, particle trace

