STUDY ON EFFECTS OF SEA BREEZE FOR DECREASING URBAN AIR TEMPERATURES IN SUMMER

-Analyses based on long-term multi-point measurements and observed windcondition-

In this study, relationships between air temperatures and windconditions were analyzed to clarify effects of sea breeze for decreasingurban air temperature. Analyzed data were air temperatures based onlong-term multi-point measurement and wind conditions at near seashore.Particularly wind conditions were used after the data were resolve intosea breeze component velocity, because main wind direction in summer of Sendai city area was southeast and this direction meant sea breeze.

Relationships between sea breeze component velocity and airtemperature at the measurement point near seashore were analyzed. And relations of distances from the near seashore, the arrival time of seabreeze on each point and sea breeze component velocity were analyzed,too. As a result, it was clarified a rise of air temperature was decreased with increases of sea breeze component velocity. And it was confirmed relationships between the arrival time of sea breeze on each measurement point and sea breeze component velocity had high correlation. Finally, effects of sea breeze for decreasing urban temperatures were shown as a distribution map, and the effects were clarified spatially and quantitatively.