Prof WONG Nyuk Hien is the Principal Investigator of Climatic Mapping of Business Park for Environmental Quality Assessment, a joint research between NUS and JTC. The main aim of this joint research is to develop climatic maps for the Business Park to obtain correlation between building – pavement – greenery, ambient temperature and CO₂ emission, which ultimately can be utilized to examine the effectiveness of the various urban environmental solutions such as greenery, cool roof and facades etc to improve the environmental conditions, comfort and consequently the energy efficiency of the buildings.

Prof. Wong was the principal investigator of a number of research projects in collaboration with the various government agencies. His joint research study with National Parks Board (NParks) on the study of rooftop gardens in Singapore has generated tremendous interest from the public and the industry on rooftop greening. Based on the findings of the study, NParks and HDB have embarked on the trial test of the extensive rooftop garden systems in Punggol. He also conducted another research study on the Urban Heat Island effect in Singapore funded by Building and Construction Authority. His study has identified the severity of the Urban Heat Island effect in Singapore and has recommended a number of mitigation measures to ameliorate the impacts. He also worked with NEA, HDB and JTC on the various other research projects with include Thermal performance of façade materials and design and the impacts on indoor and outdoor environment, Ventilation of HDB Hawker Centres and Its Impact on Thermal Comfort as well as The impact of vegetation on Environmental Conditions and Energy Efficiency of Industrial Facilities. The current ongoing project is Climatic Mapping of Business Park for Environmental Quality Assessment

Prof. Wong has published more than 150 international referred journal and conference papers and was the co authors of 3 books on rooftop and urban greenery and has been invited to deliver keynote papers and research findings in various conferences and symposiums. He has also been invited to serve in the various advisory committees both locally and internationally.