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Research Achievements and Future Strategies for Citizen-Centric Public Health and Environment in Seoul

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Mega-cities like Seoul face complex health and environmental challenges driven by high population density, mobility and diverse citizens' needs. The presentation outlines the key research achievements and strategic initiatives of the Seoul Metropolitan Government Research Institute of Health and Environment on health and environmental issues in Seoul. Focusing on critical urban challenges, our work encompasses environmental monitoring, including air and water quality, as well as public health issues such as infectious disease control and food safety concerns. We present our data-driven findings supporting relevant policies and discuss future research directions designed to address evolving environmental and health challenges in this Asian mega-city. These efforts are integral to the broader metropolitan governance aimed at improving Seoul citizens' well-being. We also propose directions for future research, which are vital for a sustainable mega-city. Our future strategy includes Seoul's proactive research-based approach to climate change, focusing on developing a resilient "Climate Crisis Safe Special City" and conducting surveillance and prevention for climate-sensitive health issues like mosquito-borne diseases. Additionally, we also show our research expanding into emerging health risks such as micro-plastics in ambient air and drinking water and interdisciplinary field of *One Health*, which integrates human, animal, and environmental health. Here, we welcome international joint research, mirroring efforts to strengthen global cooperation as well.

Key words: mega-city, health and environmental issues, emerging health risks, global cooperation