

# BIOHAZARDS AND HEALTH RISKS DUE TO URBAN HEAT ISLAND

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ABSTRACT. This paper presents an economic model of biohazards due to urban heat island and resulted health risks in the theoretical framework of the New Consumer Theory, in which *Gorman-Lancasterian characteristics* compose goods, and heat and trace gases as *intangible attributes* combine the urban atmosphere. Sen's capability approach is also taken to define negative impacts of urban warming upon each metropolitan resident's functionings *à la* Sen. It is shown that any inhabitant maximizes his/her *happiness function* by consuming goods, emitting heat and gases in the urban atmosphere, and trying to avoid health risks brought by urban warming. Producers and gardeners respectively provide goods and plant trees in metropolitans' gardens. A tax-subsidy scheme is proposed to cope with urban heat island, which aims to optimally adjust heat in the urban atmosphere.

*Key Words:* biohazards, goods as a complex of Gorman-Lancasterian tangible and intangible attributes, heat as an attribute, Sen's functionings and happiness function, vermin

“Mischief, thou art afoot.” Julius Caesar III. ii

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