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Mathematical Model Applied to Green Building Concept for Sustainable Cities Under Climate Change

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ABSTRACT

Recently the effect of greenhouse gases (GHGs) is worldwide terrified anxiety to the public and scholars. Even this global problem is one of the great issues that continuously makes worrying the governments and environmentalists, but its solution findings are not out of the image at all. In this study, we have proposed and analysed a mathematical model for the solvable management of GHGs by sowing the seeds of green building dynamic systems. Moreover, in the model, the human community is used to enhance the production power of individuals of green buildings by absorbing the GHGs. The model is analysed by stability analysis at the equilibrium points: trivial and global equilibrium, and also by convincing the stability and instability of the system of equations. The behaviour of the propound model has been developed by numerical simulations which shows the rate of the fruitfulness of GHG components.

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1. Introduction

In recent years, green building has become a powerful tool to fight against global warming. Generally, green building is not only a specific construction method but also a gathering of techniques, technologies and equipment which are applied into construction to make it

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