

突发水灾害应急合作的行为博弈模型研究

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Behavioral Game Research of Emergency Management Cooperation for Unexpected Water Disaster

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摘要 本文针对突发水灾害应急管理中的多主体合作问题进行了探讨。运用博弈论和数值仿真方法, 引入合作效用概念, 基于收益不确定的蜈蚣博弈实验模型构建了突发水灾害应急管理中异质性主体的合作行为博弈模型; 在此基础上深入探讨了合作效用变量对突发水灾害应急管理中达成合作可能性的影响; 并通过算例进行了数值分析。

关键词: 突发水灾害 蜈蚣博弈 合作效用 合作行动空间

Abstract: The cooperation behavior within multi-agents is discussed at the background of the emergency management for unexpected water disasters in this paper. Firstly, Cooperative utility is proposed, and the cooperative model with heterogeneity agents is constructed based on the experimental model of centipede game with uncertainty payoffs. Further, in emergency management for unespected water disaster, the influence that utility of cooperation variables may esert on the cooperation possibility is deeply studied. Finally, through an illustration, the propositions from this paper are testified.

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