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中国海岸带灾害地质稳定性区划(PDF)

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Title: Stability zoning of hazard geology in coastal zone of China

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关键词: 海岸带; 灾害地质; 稳定性; 评价指标; 模糊数学

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摘要: 进行海岸带灾害地质稳定性的区划研究,旨在反映海岸带地质环境对人类工程活动的适宜程度.提出了海岸带灾害地质稳定性的概念,构建了以海岸带灾害地质类型为基础的海岸带灾害地质稳定性评价指标体系,并利用层次分析法确定了各评价指标权重值.将我国海岸带划分为2 882个评价单元,利用海岸带灾害地质图、地震动峰值加速度区划图和地貌图等数字化图层,采用模糊综合评判方法对海岸带灾害地质稳定性进行了定量评价.在此基础上将我国海岸带灾害地质稳定性划分为5级,即基本稳定、较稳定、较不稳定、不稳定段和极不稳定岸段.其中,基本稳定岸段分布于我国杭州湾以北;不稳定岸段分布于福建广东交界地带和台湾岛西部;极不稳定岸段分布于台湾岛东部;较稳定岸段和较不稳定岸段则交错分布于我国海岸带其余部分.

Abstract: The research aim is to reflect the adaptable degree of geological environment in coastal zones to human engineering activity by the study of stability zoning of hazard geology in coastal zone.In this paper,the concept of hazard geology stability in coastal zone is put forward,and the assessm entindex system of hazard geology stability of coastal zone is established.And by the hierarchy analysis method,the weight value of each assessment index is cal culated.Then,the coastal zone in our country is divided into 2882 cells,and the hazard geology stability for each cell is evaluated by using fuzzy synthetic evaluation method.The basic data for evaluation is from the hazard geology map,seismic acce leration zoning map and topography map in the coastal zone.Based on the evaluation result, the stability of hazard geology of coastal zone in China is divided into 5 levels.That is,basically stable segment, relatively stable segment, relatively

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instable segment, instable segment, and highly instable segment. In the coastal zone,basically stable segments scatter in the north area of Hangzhou Bay,and instable segments lie in the intersection area between Fujian Province and Guangdong Province and the west section of Tawian Island,and the highly instable segment is located in the east section of Tawian Island,and the relatively stable and relatively instable segments distribute in the rest segments.

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