

ANALISIS KERENTANAN FISIK BANGUNAN TERHADAP BENCANA TSUNAMI

DI WILAYAH PESISIR KECAMATAN SRANDAKAN

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INTISARI

Indonesia memiliki banyak wilayah yang rawan terhadap bencana tsunami. Wilayah yang rawan tersebut salah satunya adalah kepepesisiran selatan Jawa. Oleh karena itu, perlu dimasukkan komponen manajemen risiko bencana dalam upaya pengurangan bahaya dan upaya antisipasi daya rusak. Upaya yang dilakukan berupa tindakan preventif diperlukan sebagai upaya perlindungan kawasan kepepesisiran salah satunya terkait analisis kerentanan. Tujuan penelitian adalah mengidentifikasi kondisi parameter kerentanan bangunan di kawasan rawan bencana tsunami wilayah pesisir Kecamatan Srandakan. Selanjutnya, mengidentifikasi tingkat kerentanan fisik bangunan di kawasan rawan bencana tsunami wilayah pesisir Kecamatan Srandakan. Analisis kerentanan bangunan terhadap bencana tsunami dengan salah satunya dilakukan dengan model PTVA-4. Hasil penelitian menunjukkan kondisi atribut parameter kerentanan bangunan memiliki kondisi yang bervariasi. Atribut dalam model ini mencakup komponen kerentanan bangunan dan bangunan sekitar. Atribut dalam komponen kerentanan bangunan mencakup material bangunan, jumlah lantai, pondasi, hidrodinamisasi lantai dasar, tapak bangunan, dan pemeliharaan bangunan. Selanjutnya, pada komponen bangunan sekitar atribut di dalamnya mencakup baris bangunan, penghalang alami, adanya seawall, adanya dinding bata di sekitar bangunan, dan ketersediaan objek bergerak di sekitar bangunan. Tingkat kerentanan fisik bangunan didominasi dengan tingkat kerentanan tinggi dengan rentang nilai RVI 3,21–4,22 sejumlah 63 bangunan dengan persebaran di sebelah selatan lokasi penelitian dekat dengan pantai. Selanjutnya kerentanan sedang dengan rentang nilai RVI 2,48–3,20 sebanyak 43 bangunan bagian utara lokasi penelitian. Terakhir, bangunan tingkat kerentanan rendah dengan nilai RVI 2,46–2,47 sebanyak 2 bangunan bagian tengah lokasi penelitian.

Kata kunci: tsunami, kerentanan bangunan, PTVA-4

ANALYSIS OF THE PHYSICAL VULNERABILITY BUILDINGS TO TSUNAMI DISASTER

IN THE COASTAL AREA OF SRANDAKAN DISTRICT

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ABSTRACT

Indonesia has many areas that are prone to tsunami disasters. One of these vulnerable areas is the southern coast of Java. Therefore, disaster risk management components need to be included in efforts to reduce hazards and efforts to anticipate damage. Efforts taken in the form of preventive measures are needed as an effort to protect coastal areas, one of which is related to vulnerability analysis. The objective of this research is to identify the condition of building vulnerability parameters in tsunami-prone areas in the coastal area of Srandakan District. Next, identify the level of physical vulnerability of buildings in tsunami-prone areas in the coastal area of Srandakan District. Analysis of the vulnerability of buildings to the tsunami disaster was carried out using the PTVA-4 model. The results showed that the condition of the attributes of the building's vulnerability parameters has varied conditions. The attributes in this model include the vulnerability components of buildings and surrounding buildings. Attributes in the building vulnerability component include building materials, number of floors, foundations, hydrodynamic ground floor, building footprint, and building maintenance. Furthermore, the building components around the attributes include building rows, natural barriers, the presence of seawalls, the presence of brick walls around the building, and the presence of moving objects around the building. The level of physical vulnerability of buildings is dominated by a high level of vulnerability with an RVI value range of 3.21–4.22 for a number of 63 buildings with distribution in the south of the study location close to the beach. Furthermore, moderate vulnerability with an RVI value range of 2.48–3.20 is for 43 buildings in the northern part of the study location. Finally, there are 2 buildings with a low vulnerability level with an RVI value of 2.46–2.47 in the middle of the study location.

Keyword: tsunami, building vulnerability, PTVA-4