

STRATEGI PENGELOLAAN WILAYAH PESISIR KABUPATEN SARMI DALAM UPAYA MITIGASI TSUNAMI

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ABSTRAK

Distrik Sarmi merupakan ibukota Kabupaten Sarmi yang mempunyai tatanan tektonik cukup kompleks. Letak geografis yang berada dekat dengan zona subduksi utara Papua membuat Distrik Sarmi terindikasi ancaman tinggi bencana tsunami. Kepadatan penduduk serta aktifitas perekonomian di Distrik Sarmi akan menambah tingkat kerentanan jika suatu saat terjadi bencana tsunami. Penelitian ini bertujuan mengidentifikasi tingkat kerentanan bahaya tsunami dan menganalisis kesiapsiagaan masyarakat serta strategi pengelolaan pesisir untuk mitigasi tsunami di Distrik Sarmi. Perangkat lunak COMCOT (*Cornell Multi-grid Coupled Tsunami Model*) digunakan untuk melakukan pemodelan tsunami dengan sumber data sekunder dari histori kejadian gempa bumi dan tsunami yang pernah terjadi di Papua. Dengan skenario sumber gempa bumi kekuatan maksimal M8.7, COMCOT memodelkan waktu tiba gelombang tsunami di pesisir antara 5 – 20 menit dan jarak landaan dapat mencapai maksimum 3 Km ke daratan. Dari hasil peta bahaya tsunami di distrik Sarmi, 4 kampung/kelurahan berpotensi terkena landaan gelombang tsunami dengan run up sampai dengan 6 meter. Analisis kesiapsiagaan masyarakat masuk ke dalam kategori SIAP berdasarkan ukuran baku kesiapsiagaan bencana. Sementara pengelolaan pesisir dalam mitigasi tsunami di Distrik Sarmi harus berwawasan lingkungan dengan alternatif strategi penanaman hutan mangrove.

Kata Kunci : *COMCOT, Peta bahaya, Kesiapsiagaan, AHP*

MANAGEMENT STRATEGY OF COASTAL AREA SARMI REGENCY IN TSUNAMI MITIGATION EFFORTS

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ABSTRACT

Sarmi District serves as the capital of Sarmi Regency, which exhibits a rather intricate tectonic arrangement. Its proximity to the northern subduction zone of Papua implies a high susceptibility to tsunami disasters in Sarmi District. The density of population and economic activities in the district contribute to an increased vulnerability level in the event of a tsunami. This study aims to identify the vulnerability level to tsunami hazards, analyze community preparedness, and propose coastal management strategies for tsunami mitigation in Sarmi District. The COMCOT software (Cornell Multi-grid Coupled Tsunami Model) is utilized to simulate tsunamis, employing secondary data sources from historical earthquakes and tsunamis that have occurred in Papua. Assuming a maximum earthquake source scenario of M8.7, COMCOT models the arrival time of tsunami waves on the coast between 5 to 20 minutes, with the maximum run-up distance reaching up to 3 km inland. The results of the tsunami hazard map in Sarmi District indicate that four villages are at risk of being affected by tsunami waves with a run-up of up to 6 meters. The analysis of community preparedness falls under the category of "READY" based on standardized disaster preparedness measures. Meanwhile, coastal management for tsunami mitigation in Sarmi District should adopt an environmental perspective, incorporating alternative strategies such as mangrove reforestation.

Keywords: *COMCOT, hazard map, preparedness, AHP*