Penentuan Wilayah Prioritas Penerapan Rumah Tahan Gempa di Daerah Istimewa Yogyakarta

INTISARI

Daerah Istimewa Yogyakarta merupakan salah satu provinsi di Indonesia yang pernah mengalami kejadian gempa bumi yang besar. Gempa bumi tersebut mengakibatkan banyaknya korban jiwa yang disebabkan oleh runtuhan bangunan. Penelitian ini dilakukan di Provinsi Daerah Istimewa Yogyakarta sebagai salah satu wilayah yang memiliki indeks rasio bencana sedang sebesar 140,92 dengan risiko gempa bumi setiap kabupaten dan kotanya tinggi. Tujuan dari penelitian ini yaitu, 1) Mengklasifikasikan kecamatan di Daerah Istimewa Yogyakarta ke dalam kelas kerawanan bencana gempa bumi, 2) Mengidentifikasi wilayah prioritas untuk kebijakan penerapan rumah tahan gempa di Daerah Istimewa Yogyakarta. Penelitian ini menggunakan metode campuran. Metode analisis spasial untuk mencapai tujuan dengan tumpang tindih antara peta kerawanan bencana gempa bumi di Daerah Istimewa Yogyakarta dengan peta batas administrasi kecamatan di Provinsi Daerah Istimewa Yogyakarta. Tujuan dua dicapai dengan deskriptif kualitatif menggunakan *Analytic Hierarchy Process* (AHP) dengan pembobotan indikator yang dilakukan oleh narasumber ahli melalui kuesioner *pairwise comparison.* Kuesioner *pairwise comparison* diisi oleh narasumber ahli berasal dari instansi berwenang yang terkait mengenai perencanaan, kebencanaan, permukiman, serta akademisi. Hasil pengisian bobot melalui kuesioner *pairwise comparison* d proses dengan *software Expert Choices* untuk mendapatkan bobot tiap indikator. Indikator yang digunakan untuk menentukan wilayah prioritas penerapan rumah tahan gempa yaitu, jumlah rumah tidak layak huni, jumlah penduduk miskin, UMK kabupaten dan kota, jumlah penduduk, kepadatan penduduk, jumlah penduduk usia rentan, rasio jenis kelamin, jumlah penduduk tidak sekolah, dan jumlah penyandang disabilitas. Setiap nilai indikator disesuaikan dengan cara *scalling*, kemudian indikator dikalikan dengan bobot untuk mendapatkan nilai skor akhir tiap kecamatan.

Hasil penelitian ini menunjukkan terdapat 8 kapanewon yang masuk ke dalam kelas kerawanan sangat tinggi, 32 kapanewon dan kemantren masuk ke dalam kelas kerawanan tinggi, 35 kapanewon dan kemantren masuk ke dalam kelas kerawanan sedang, dan 3 kapanewon masuk ke dalam kelas kerawanan rendah. Kapanewon Banguntapan, Kapanewon Imogiri, Kapanewon Dlingo, Kapanewon Piyungan, Kapanewon Jetis, Kapanewon Pleret, Kapanewon Pundong, dan Kapanewon Kretek menjadi kapanewon yang memiliki prioritas lebih dalam penerapan rumah tahan gempa di bandingkan kapanewon atau kemantren lainnya di Daerah Istimewa Yogyakarta. Wilayah dengan prioritas tinggi untuk penerapan rumah tahan gempa terletak di sepanjang Sesar Opak, Kabupaten Bantul Provinsi Daerah Istimewa Yogyakarta.

Kata kunci : Penanggulangan Bencana, Gempa Bumi, Mitigasi Bencana, Rumah Tahan Gempa.

Determination of Priority Region for Implementation of Earthquake Resistant Houses in the Special Region of Yogyakarta

ABSTRACT

The Special Region of Yogyakarta is one of the provinces in Indonesia that has experienced a large earthquake. The earthquake resulted in many casualties caused by collapsed buildings. This research was conducted in the Special Region of Yogyakarta Province as one of the region that has a moderate disaster ratio index (140.92) with a high risk of earthquakes for each district and city. The aims of this study are, 1) Classifying sub-districts in the Special Region of Yogyakarta into earthquake prone classes, 2) Identifying priority areas for policies on implementing earthquake-resistant houses in the Special Region of Yogyakarta. In order to achieve the predetermined objectives, this research uses mixed methods. The spatial analysis method is to achieve the goal by overlapping the earthquake hazard map in the Special Region of Yogyakarta with the sub-district administrative boundary maps in the Province of the Special Region of Yogyakarta. The second objective was achieved by qualitative descriptive using the Analytic Hierarchy Process (AHP) with the weighting of the indicators carried out by expert sources through a pairwise comparison questionnaire. The pairwise comparison questionnaire was filled out by expert sources from relevant authorities regarding planning, disaster, settlement, and academics. The results of filling in the weights through a pairwise comparison questionnaire were processed with Expert Choices software to obtain the weights for each indicator. The indicators used to determine the priority areas for implementing earthquake resistant houses are the number of uninhabitable houses, the number of poor people, district and city minimum wages, total population, population density, number of people of vulnerable age, sex ratio, number of people not attending school, and number of persons with disabilities. Each indicator value is adjusted by scaling, then the indicator is multiplied by the weight to get the final score for each sub-district.

The results of this study showed that there were 8 Kapanewons that were included in the very high vulnerability class, 32 Kapanewon and Kemantren were included in the high vulnerability class, 35 Kapanewon and Kemantren were included in the moderate vulnerability class, and 3 Kapanewons were included in the low vulnerability class. Kapanewon Banguntapan, Kapanewon Imogiri, Kapanewon Dlingo, Kapanewon Piyungan, Kapanewon Jetis, Kapanewon Pleret, Kapanewon Pundong, and Kapanewon Kretek are the Kapanewons that have more priority in implementing earthquake-resistant houses compared to the Kapanewon or other kemantren in the Special Region of Yogyakarta. Focusing on the implementation of earthquake-resistant houses was made in the southern part of the Special Province of Yogyakarta, precisely in Bantul Regency, which is close to the Opak Fault.

Keyword : Disaster Risk Reduction, Earthquake, Disaster Mitigation, Earthquake Resistant-Houses, Seismic Building.