



## INTISARI

Sebagian wilayah Kota Pekalongan terletak di kawasan pesisir utara Pulau Jawa. Wilayah yang terletak di daerah pesisir tersebut sering terjadi banjir rob. Pengertian dari banjir rob sendiri yaitu salah satu bencana di mana air laut meluap dan menggenangi daratan. Banjir rob disebabkan oleh pemanasan global dan pemanfaatan air tanah yang berlebihan. Banjir rob juga dapat diperparah oleh sampah yang dibuang di sungai yang menyebabkan air meluap ke daratan. Banjir rob ini memberikan dampak negatif seperti penurunan kualitas lingkungan, menyebabkan timbulnya beberapa masalah kesehatan, aktivitas masyarakat menjadi terganggu, dan beberapa infrastruktur fisik menjadi rusak. Salah satu usaha untuk menanggulangi banjir rob yaitu dengan melakukan kegiatan pemetaan risiko banjir rob di area permukiman Kota Pekalongan. Kegiatan penelitian ini bertujuan untuk memetakan daerah di Kota Pekalongan (terutama Pekalongan Utara dan sebagian Pekalongan Barat) yang berisiko banjir rob dan menghitung luas permukiman yang berisiko terendam banjir rob.

Pembuatan peta risiko ini dilakukan dengan *Multi Criteria Overlay Analysis*. Kegiatan pemetaan risiko banjir rob dilakukan dengan pembuatan peta ancaman, kerentanan, dan kapasitas terlebih dahulu. Peta risiko merupakan hasil dari *overlay* komponen ancaman, kerentanan, dan kapasitas. Setiap komponen ancaman, kerentanan, dan kapasitas dilakukan pembobotan terlebih dahulu sebelum dilakukan *overlay* untuk menghasilkan peta risiko. Peta risiko tersebut akan dilakukan *overlay* menggunakan operasi *intersect* dengan data permukiman. Luas permukiman yang berisiko terendam banjir rob dapat diketahui dari proses *overlay* tersebut. Selain itu, juga dilakukan operasi *zonal statistics as table* antara peta risiko banjir rob dengan data jumlah penduduk yang memiliki format raster. Hasil dari operasi *zonal statistics as table* adalah jumlah penduduk berisiko terdampak banjir rob yang disajikan per kelurahan. Selain pengolahan data sekunder, juga dilakukan pengamatan lapangan pada daerah yang terendam banjir rob. Hasil pengamatan lapangan ini dapat dibandingkan dengan hasil pengolahan menggunakan data sekunder.

Berdasarkan kegiatan pengolahan yang sudah dilakukan, diketahui bahwa kelas risiko banjir rob di wilayah Kota Pekalongan ada tiga, yaitu rendah, sedang, dan tinggi. Permukiman di Kota Pekalongan berada di tiga kelas risiko banjir rob. Permukiman di sebagian wilayah Pekalongan Utara berada di kelas risiko banjir rob tinggi. Permukiman di Kota Pekalongan sebagian besar berada di kelas risiko banjir rob sedang. Luas permukiman yang berisiko terendam banjir rob di Kota Pekalongan yaitu 568,5044827 Ha. Jumlah rumah yang berisiko terendam banjir rob di Kota Pekalongan yaitu 24.381.

Kata kunci: Banjir Rob, Risiko, Permukiman, Kota Pekalongan



## ***ABSTRACT***

Some areas in Pekalongan City is located in the northern coastal area of Java Island. The area located in the coastal area often experiences coastal flood. The definition of coastal flood itself is a disaster in which sea water overflows and inundates the land. Coastal flood is caused by global warming and excessive use of groundwater. Coastal flood can be exacerbated by garbage which is thrown in rivers that causes water to overflow onto the land. This coastal flood has negative impacts such as decrease the quality of the environment, causing several health problems, community activities are disrupted, and some physical infrastructures are damaged. One of the efforts to overcome coastal flood is by conducting coastal flood risk mapping activities in the residential area of Pekalongan City. This research activity aims to map areas in Pekalongan City (especially North Pekalongan and parts of West Pekalongan) that are at risk of coastal flood and calculate the area of the residential area that are at risk of being inundated by coastal flood.

*Multi Criteria Overlay Analysis* was used in the creation of risk map. The coastal flood risk mapping activity was carried out by making hazard, vulnerability, and capacity map, first. The risk map was generated by overlaying the components of hazard, vulnerability, and capacity. Each component of hazard, vulnerability, and capacity was weighted before being overlaid to produce a risk map. The risk map would be overlaid using intersect operation with residential area data. The area of the residential area which were at risk of being inundated by coastal flood could be determined from the overlay process. In addition, zonal statistic as table operation was also carried out between the coastal flood risk map and population data in raster format. The result of the zonal statistics as table operation was the number of residents at risk of being affected by coastal flood which was presented per urban village. In addition to processing secondary data, field observation was also carried out in areas that were inundated by coastal flood. The result of field observation could be compared with the result of processing using secondary data.

Based on the processing activities that have been done, it is known that there are three classes of coastal flood risk in Pekalongan City, namely low, medium, and high. The residential area of Pekalongan City are in the three classes of coastal flood risk. Some residential area in North Pekalongan are in high coastal flood risk class. Most of the residential area of Pekalongan City are in the medium coastal flood risk class. The area of residential area which are at risk of being inundated by coastal flood in Pekalongan City is 568,5044827 Ha. The number of houses which are at risk of being inundated by coastal flood in Pekalongan City is 24.381

**Keywords:** Coastal Flood, Risk, Residential Area, Pekalongan City