REMOTE SENSING AND SPATIAL STATISTICS APPROACH FOR ANALYZING RELATION BETWEEN WASTE VOLUME AND TEMPORARY WASTE DISPOSAL TOWARDS PUBLIC HEALTH

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Urban land grow up quickly and was accompanied by a significant population increase. This led to an increasing number of volumes of waste from various sources. The amounts of volume of waste need to known exactly to determine the proper waste management system. Therefore we need an effective method to calculate the volume of waste. Many methods developed over the years is to estimate the volume of waste by the population, but this method requires a long time while the population continues to grow. One of the method that now popularly used is estimating the volume of waste using remote sensing and geographic information systems, which is able to provide information more efficient.

Limited land in urban areas causes the waste become problems that can be felt directly by sorrounded community . Waste that generated every day need a temporary waste disposal (TPS) for a reservoir. TPS has an important role in waste management, so it need special attention. The location of TPS that not comply with its standart and technical criteria will be able to interfere both of aesthetics and the health of the sorrounding environment, which also caused public health disruption. Health disruption may happen because many diseases are caused by environmental factors.

The causes of the disease in the community can not directly extracted through remote sensing data. But environmental factors that was allegedly may affect the incidence of the disease can be extracted through remote sensing data. In this case, environmental factors that used are estimated volume of waste and distribution of the TPS. Environmental data extraction through remote sensing has more advantage, because the extraction can be performed quickly and up to date.

The volume of waste will be estimated based on the number and type of building that will be extracted by visual interpretation through high resolution remote sensing data. While the distribution of TPS will be obtained through statistical data. Both of estimated volume of waste and distribution of TPS are used to analyzed their correlation with distribution of the disease incidence in the study area using spatial statistical approach. Distribution of the disease insidence will used to assess public health in the study area. Spatial statistical approach was chosen because it has the ability to identify the relation of various geographical phenomena. Results of the correlation will provide the relation between environmental factors such as the estimated volume of waste and TPS with public health in study area.

Keyword : Geoeye, Spatial Statistics, Public Health, Waste, Urban