

## THE EDGE EFFECT TOWARDS BIG MAMMALS POPULATION AND DISTRIBUTION IN ALAS PURWO NATIONAL PARK

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### Abstract

*Edge Effect* is an ecological phenomenon that is found in the transition area between two or more habitat types where the biodiversity and the abundance of wild life especially animal dynamics are abound. This phenomenon is mostly found around the edge area. Major influence and the most essential thing from this edge effect is the alteration of biotic factors; light intensity, humidity, temperature and drastic wind velocity which directly and indirectly will also influencing wild life dynamics living inside.

Method used in this research was line transec method. Determination of big mammals population estimation was using direct observation method which then analysed by using King's formula. Meanwhile, to find out the distribution of big mammals was using direct and indirect observation method then its described by map. Analysis of factorial program was done to find out the relation of each variabls, edge area type and area distance from edge area towards big mammals population.

Test result of factorial program with 95% rate of reliability showing that area distance from edge area didn't give a significant influence to big mammals population in the distance of 0-500 meter and 500-1000 meter with 0,954 of sig value. This is different compare to former hypothesis which was area distance from edge area gave significant influence to big mammals population. The population of big mammals apparently morely influenced by the different of edge area types with 0,15 sig value, and among five types of edge area that has been tested, coast area gave the most significant influence. Mapping analysis that has been done towards big mammals distribution pattern gave a result that most of the big mammals distribution patterns in Alas Purwo National Park are evenly distributed both from its distance side to the edge area and the different types of edge area.

Keywords: *Edge Effect* and big mammals

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