

## **A Preliminary Survey on the Effect of Anthropogenic Noise to Bird Community in Gaya Island**

### **ABSTRACT**

To date, there is still scarce study that has been done looking on the impact of the anthropogenic noise in influencing the bird community in Gaya Island as it acts as an important indicator for the health of the island's ecosystem. Hence, this preliminary study aims to determine the effect of the anthropogenic noise on the bird community in Gaya Island. The data collection was conducted for three months in three of the selected sites within the island. The methods that were being used were the point count sampling and noise mapping respectively. The anthropogenic noise level that was being measured at the selected sites ranges from 29dB to 80dB. Meanwhile, descriptive analysis, diversity indexes and correlation analysis were used to analyze the obtained data. A total of 422 individuals from 24 species and 16 families were recorded during the survey in Gaya Island. The result of the Shannon Wiener index showed that the diversity of the birds in low anthropogenic noise zone is slightly higher ( $H'=2.559$ ) as compared to the bird in high anthropogenic noise zone ( $H'= 2.558$ ) even though there is no significant different in terms of diversity of birds between these two zones. However, the Spearman's correlation analysis showed a very significant and negative correlation of the anthropogenic noise with the abundance and species richness of bird ( $r= -0.076$ ,  $p=0.000$ ). Therefore, this study shows that the bird community is negatively affected with the increasing of anthropogenic noise in Gaya Island.