Group-size effect on vigilance and flight initiation distances of Adélie penguins in south-eastern Antarctica

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*Submitted by Delegation of China*

Summary

Distances between the humans and animals to trigger the animals’ vigilance are commonly called Vigilance Initiation Distances (VID), and the distances for the birds to feel threatened and then escape are called Flight Initiation Distances (FID). The 36th Chinese National Antarctc Research Expedition (CHINARE-36) has found that the VID for Adélie Penguins in response to the approaching of the 22, 000t R/V Xue Long when they were in groups on floating ices was about 76.22 m, and the corresponding FID was about 56.77 meters.

China’s Research to Find out the VID and FID

For the Adélie Penguins, there was little research about their VID and FID to potential disturbances form human activities. To fill the knowledge gap, the CHINARE-36 conducted a survey on these parameters of Adélie Penguins in the Cosmonaut Sea, the Cooperation Sea, and Prydz Bay from December 2019 to January 2020. The result was that Adélie Penguins in groups on floating ices would become alert when the 22,000t R/V Xue Long approached to a distance of about 76.22 m (VID), and that the birds would escape when the distances were about 56.77 m (FID). The VID and FID of individual birds in the same circumstances would be shorter. The CHINARE-36 has also done similar experiments on some other birds and mammals at the sea, and the data of which are under collation.

Suggestions

The VID and FID experiment and data could be used to support the future development of possible guidelines for vessels operation, with a view to keep safe distance in order to avoid or reduce disturbance to the animals at sea in the Antarctic Treaty Area. CEP could encourage members to conduct such research with their national program, and encourage SCAR and IAATO to report their related data and results for future consideration. China is willing to contribute more related scientific data in the future to support the work of the ATCM and CEP.