

Bioacoustic Characteristic Click Sound and Behaviour of Male Dolphins Bottle Nose (*Tursiops aduncus*)

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Abstract

We Discuss the problem of bioacoustics research, Bioacoustic is the science that combines biology and acoustics which refers on the production of sound, dispersion and reseption animals and humans. This study using acoustic and behavioral observations of dolphins by using passive acoustic science (bioacoustic) to see the difference pattern of sound, and treatment given in this study is a before and after eating at Safari Park Indonesia, Cisarua Bogor. Sound dolphins have the lowest intensity value of 28.03 dB and highest is 32.01 dB. Parameter salinity 30 ppm and temperature of 23°C with a pool depth of 4.4 meters. Range frequency the highest is 14.000-16.000 Hz and intensity is the highest value of a click on the second day with the highest intensity was 32.01 dB and lowest before eating.

Keywords: Bioacoustic; Male Bottle Nose (*Tursiops aduncus*); Fisheries; Fisheries

Introduction

In the world of fisheries, acoustic passive methods applied to monitor marine mammals and seals. Signals obtained from recording sounds marine mammals can be used for all applications and the utilization of the sound. The first job is, Passive sound recording from animals. A method of acoustic passive also used in the effort to monitor the behavior of seals in the field of research. Hearing of Marine mammals is measured in the field using use ultrasonic echolocation or echolocation. Characteristics of hearing and the presence of the frequency of Clicks are important in the study of Acoustic

Citation:

dB. While the sound of a Dolphin clicks 2 has a minimum intensity of 22.42 dB, the maximum intensity of 28.70 dB, and the sound of a Dolphin clicks 3 has a minimum intensity of 23.07 dB and a maximum value of 26.12 dB. A click of 4 has a minimum intensity value of 23.05 dB and a maximum intensity of 26.37 dB. We also see the intensity of Dolphin clicks 1 has a higher minimum intensity is 23.15 dB and maximum intensity is 28.70 dB. While the intensity of the lowest clicks 2 is 22.42 dB and maximum intensity of the lowest is 26.12 dB. The frequency of the intensity area range of 100 Hz and 10 kHz.

Based on Table 4 a correlation of parameters of the sound of Dolphin 0711.83 T²(Base of Table 4 a erf5)0.5(of)0.111f of the intensity

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References

1. Azzolin M, Papale E, Lammers MO, Gannier A, Giacoma C (2013) Geographic variation of whistles of the striped dolphin (*Stenella coeruleoalba*) within the Mediterranean Sea. *The Journal of the Acoustical Society of America* 134: 694-705.
2. Mellinger DK, Stafford KM, Moore SE, Dziak RP, Dan MH (2007) An Overview of Fixed Passive Acoustic Observation Methods for Cetaceans. *Journal of Oceanography* 20: 36-45.
3. Borowski B, Alexander S, Heui-Seol R, Bunin, Barry (2008) Passive acoustic threat detection in estuarine environments. *Proc. of Society of Photographic Instrumentation Engineers* 6945: 1-11.
4. Dorian SH, Crocker ED, Colleen R, Jason M, Finneran JJ (2007) Auditory