

Abstract Submitted  
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**Global warming impact on low frequency sound absorption in the sea: update and possible projection.** DAVID BROWNING, PETER HERSTEIN, Browning Biotech — Of the estimated 2.5 million pounds of carbon dioxide that is ejected every second into the earth's atmosphere, approximately 25% is absorbed into the ocean resulting in increasing ocean acidification. In addition to harmful effects on marine life, this acidification also impacts the principal cause of low frequency sound absorption in seawater, resulting in a decrease in low frequency sound propagation loss in the ocean. Recent data show a continuation of the steady increase in atmospheric carbon dioxide with a corresponding decrease in ocean surface pH (thereby increasing acidification) that has occurred in this century. The United Nations Climate Action Summit 2019 strongly recommends that these levels be stabilized in 12 years which would limit the decrease in low frequency absorption to 25%. The potential impact on the SONAR equation will be discussed.

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