

Can You “Sea” The Light?

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Abstract

Though current fishing methods are reasonably sufficient, mathematical applications of light refraction can unequivocally mitigate the wasteful practices that limit the potential of marine resources. To investigate the influence of light refraction on fishing capability and efficiency, the researchers simulated water body conditions by using varying salinity levels all differing by five percent--or 125 grams of salt--in a homogenous salt-water solution. The researchers then inserted straight objects into the water and observed the angle of refraction to emulate the path that light takes when travelling through different mediums. The results validated that salinity did, in fact, affect the refractive index of the water-medium which ultimately lead to differentiating angles of refraction. The experiment determined that bodies of water with lower salinities produce minimal refraction and are the most ideal for fishing.