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Ocean Acidification: What it is, concerns and actions

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Ocean acidification is the term adopted to describe the process of change in ocean carbonate chemistry – decreasing seawater pH and carbonate ions and increasing bicarbonate ions. Ocean acidification is caused by ocean uptake of man-made CO2, it is happening now, it is measurable and it will continue as more CO2 is emitted. Already ocean acidity has increased by 30% and by 2100, if we continue emitting CO2 at the same rate, ocean acidity will be increased by 150%. Such a monumental alteration in basic ocean chemistry is likely to have wide implications for ocean life, especially for, but not only, those organisms that require calcium carbonate to build shells or skeletons. The ramifications of such profound changes if allowed to occur will inevitably impact through to human food supply. The concern for marine ecosystems and biodiversity and ocean biogeochemistry shown by scientists and stakeholders alike has been growing rapidly in recent years with national and international activities emerging in order to help reduce uncertainties and feed sound scientific evidence to policy makers, especially those involved in greenhouse gas emissions stabilization.