

Food source threatened by carbon dioxide

10 December 2007

Carbon dioxide increasing in the atmosphere may affect the microbial life in the sea, which could have an impact on a major food source, warned Dr Ian Joint at a Science Media Centre press briefing today.

Dr Joint is sequencing the DNA of different ocean bacteria to find out how they will respond to an increase in carbon dioxide. "So far from one experiment we have sequenced 300 million bases of DNA, about one tenth the size of the human genome. We are analyzing this 'ocean genome' to see if changes might affect the productivity of the sea."

Worldwide, fish from the sea provide nearly a fifth of the animal protein eaten by man. If microscopic plants that fish eat are affected by carbon dioxide, this may deplete a major food source.

"Bacteria still control the world" said Dr Joint from Plymouth Marine Laboratory. "They ensure that the planet is fertile and that toxic materials do not accumulate." The carbon dioxide produced by humans is turning the oceans into weak acids. This century, the seas will be more acidic than they have been for 20 million years.

"There are many millions of different bacteria in the ocean. They control the cycling of oxygen, carbon, nitrogen and sulphur; microbes in the sea generate half of the oxygen produced globally every year." So the atmosphere could also be affected by ocean acidification. "Bacteria made the earth suitable for animals by producing oxygen nearly 2 billion years ago. We want to find out if human activities will have a major impact on microbial life in the seas and if this is likely to be a problem for mankind in the future"

Source: Society for General Microbiology

APA citation: Food source threatened by carbon dioxide (2007, December 10) retrieved 25 September 2021 from <https://phys.org/news/2007-12-food-source-threatened-carbon-dioxide.html>

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