Scientist fears CO2 will kill oceans

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SECTION: NEWS; Pg. A12

LENGTH: 347 words

DATELINE: VANCOUVER

VANCOUVER -- Unless we halt completely the emission of carbon dioxide from the world's energy systems, we risk an oceanic catastrophe worse than the one associated with the disappearance of the dinosaurs.

That's the message a chemical oceanographer and environmental scientist intends to deliver to a conference on the future of the world's oceans today at the University of Victoria.

Ken Caldeira, who teaches out of the Carnegie Institution at Stanford University in California, says the level of acidification caused by dumping hundreds of billions of tonnes of carbon dioxide into the world's oceans is so great it could cause a major disruption on par with, or worse than, the sudden dumping of sulphuric acid into the oceans 65 million years ago when an asteroid slammed into the Earth's surface.

When that happened, he said, it took 500,000 years for plankton to reappear, two million years for corals to redevelop, and 10 million years for the current level of oceanic biodiversity to re-emerge.

And unless drastic steps are taken now, Caldeira says, a similar marine disaster could occur within the next few decades.

"We risk a catastrophic event that's on the scale of what happened in the ocean when the dinosaurs became extinct."

Caldeira is one of a dozen international experts on marine science and human ecology scheduled to take part in a two-day conference that opened Wednesday with an address by Daniel Pauly, director of the Fisheries Centre at the University of B.C.

Included among the topics for discussion are the oceans in a warming world, the proliferation of marine dead zones, petroleum exploration at sea, social conflicts during fishery crises, and whether human societies are complicit in the collapse of coastal fisheries.

Caldeira is an expert on ocean acidification, which occurs when carbon dioxide molecules react with water. This, in turn, causes hydrogen ions to be emitted in great quantities, thus lowering the ocean's pH and making it more acidic.

Last month, scientists predicted ocean acidification would kill Australia's Great Barrier Reef in 25 years.