

Ocean Acidification on the Canada's west coast: what do we really know?

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ABSTRACT: As the oceans absorb anthropogenic CO₂ they become more acidic, a problem termed ocean acidification (OA). This increase in CO₂ is occurring rapidly, and so may have significant negative implications for marine ecosystems. The body of scientific literature concerning OA is also growing rapidly. However, if one looks carefully at specific geographic regions, there are significant 'knowledge gaps'. In many coastal zones the mean present day level of acidity is unknown. These regions tend to be highly variable and so it is unlikely that reported global means, commonly assumed in OA experiments, apply. Furthermore, many marine organisms, especially those that are of economic and cultural importance (like salmon), live or spend part of their life in nearshore regions where the carbonate system may be more difficult to measure. Finally, as trophic level increases, less is known about the impact of OA in general. I explore all of these issues in the context of the Canadian west coast and its present day fisheries, as well as the potential for local contributions (such as sewage) to acidity in the region.

Dr. Debby Ianson is a federal research scientist at the Institute of Ocean Sciences in Sidney BC and an Adjunct Professor at the University of British Columbia, Simon Fraser University and the University of Victoria. Dr. Ianson's research combines fieldwork with modelling to investigate biogeochemical cycles along continental margins and their influence on the global ocean. She focuses on the impact of climate change on these cycles and on marine ecosystems. Debby is also a member of the West Coast Ocean Acidification and Hypoxia Panel convened by the California Ocean Science Trust.

ALL ARE WELCOME!!!