# Productivity changes in the subarctic Pacific, the Bering, and Okhotsk Seas since the Last Glacial Maximum

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The subarctic Pacific is known as a high biological productivity region mainly by diatoms. Particularly the central and eastern parts of the subarctic Pacific are high nutrient low chlorophyll (HNLC) regions. Biological productivity in the subarctic Pacific was markedly low during the last glacial period. Since the last glacial termination, productivity in the subarctic Pacific has increased, but considerable regional differences were observed. The open subarctic Pacific has pronounced biogenic opal and CaCO3 peaks during the Bolling-Allerod (BA) period, much higher than those in the Holocene. In the Bering Sea, except for the Kamchatka Strait, pronounced CaCO3 peaks were observed during the BA and the Preboreal (PB) periods. Biogenic opal gradually increased since LGM with a BA peak. The Okhotsk Sea and the Kamchatka Strat showed a gradual increase in biogenic opal without a BA peak. The CaCO3 pattern was similar to the Bering Sea. Major reorganization of the Pacific overturning circulation and plays the key role in the deglacial productivity changes. In the presentation, we discuss the common and different features of deglacial productivity patterns in the subarctic Pacific and its marginal seas since LGM.

 