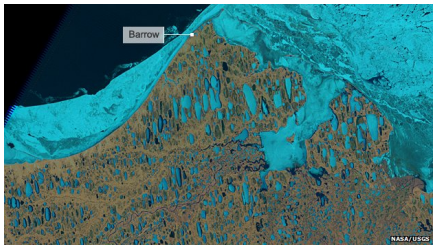

The ubiquitous shallow icy lakes that dominate Alaska's Arctic coastal plain have undergone a significant change in recent decades.

These lakes, many of which are no more than 3m deep, melt earlier in the season and retain open water conditions for much longer. And 20 years of satellite radar also now show that far fewer will freeze right through to the bottom in winter.

The results of the space-borne survey are published in The Cryosphere.

What is happening to the lakes is an example of how land ice is following the pattern of diminishing sea ice in the region, say scientists.

"The decline after 2006 is quite sharp," explained Dr Cristina Surdu from the University of Waterloo, Ontario, Canada. "This is another piece in the puzzle of climate change in the region.

"We're seeing warmer air temperatures; we're seeing sea-ice extent decreasing; and we're seeing a general greening of the Arctic with the treeline moving north. The lakes are part of that story."

Surdu's and colleagues' research focussed on an area near Barrow, the largest settlement on Alaska's North Slope.

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