

# Lake and inland sea ice

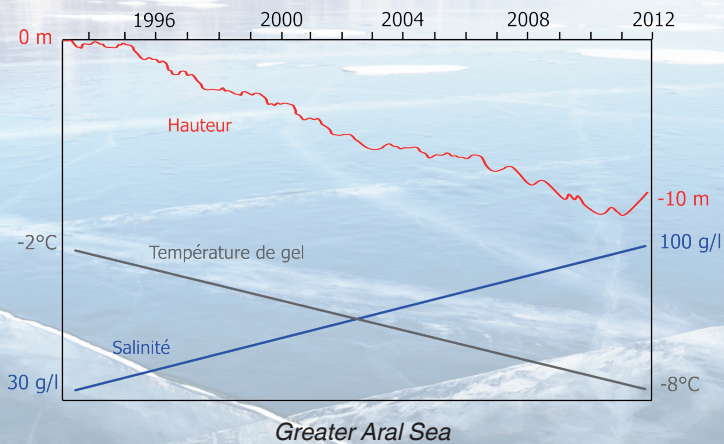


Lake Baikal - © katvic, Fotolia





Satellite altimetry also enables ice to be monitored in high-latitude inland seas and large lakes. Satellites, notably those with radar altimeters, are well suited to developing this application. Broadly speaking, as with the rivers of Siberia, global warming is causing ice to melt earlier in spring and its extent appears to be declining. This is an important factor for shipping, economies and tourism in affected regions.



The Aral Sea is a somewhat special case. The impact of humans is the main driver. The level and surface area of the Greater Aral have declined significantly, making it more saline. Its freezing point has dropped from  $-2^{\circ}$  to  $-8^{\circ}\text{C}$  and the ice extent has greatly decreased.

Conversely, the level and area of the Lesser Aral have increased thanks to the dam diverting water from the Syr Daria, its salinity has stabilized and winter ice coverage has recovered to somewhere near the levels of past decades. Researchers are also working on other regions like the Caspian Sea, Lakes Baikal, Hovsgol, Ladoga and Onega. In all of these regions, satellite altimetry data are helping to better understand and predict the impacts of humans and climate change.