

My estimate for September average sea ice extent (4.67 million sq km) was simply based on extrapolation of the 10-year trend (1989-2008).

It turns out that extrapolation of the 30-year trend (1979-2008, 5.46 million sq km) would have been very close to the observed extent of 5.36 million sq km.

Sea ice extents in September 2007 and 2008 were well below the long-term trend. At the time, there was some speculation that the decline of sea ice extent was accelerating. Now the decline is right back on the long-term trend line. The apparent acceleration turns out to have been just a couple of anomalously low years.

Those low years were due in part to the loss of older sea ice, which was replaced by younger (hence thinner) ice that was more susceptible to summer melt. This year, at the end of the 2009 melt season, there is more second-year ice than in the past few years. This raises the possibility of a recovery of old ice. This will depend on the amount of sea ice exported through Fram Strait over the coming winter and spring. It appears that much of the second-year and older ice is close enough to Fram Strait to be exported within a year. A large export would set up the Arctic for another low ice extent next summer. On the other hand, low export this winter would promote a recovery of older ice and relatively greater ice extent.

It's important to note (for public consumption) that the trend in summer sea ice extent is still downward, even if 2009 had more ice than 2007 and 2008. Thirty-year trends are not reversed in one year, or even two.

Harry Stern