# September 2012 Regional Outlook
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**Extent Projection**: $4.66 \pm 0.45 * 10^6 \, km^2$

**Method:** Statistical – a persistence forecast based on anomalies in July extent where the mean period is defined as the average of the previous five years.

*SEPT extent (t) = JUL extent anomaly (t)\*SEPT mean extent (t-1:t-5) + SEPT mean extent (t-1:t-5)*

$$JUL \text{ extent anomaly } (t) = \frac{JUL \text{ extent } (t) - JUL \text{ mean extent } (t\text{-}1\text{:}t\text{-}5)}{JUL \text{ mean extent } (t\text{-}1\text{:}t\text{-}5)}$$

**Rationale:** Persistence is a benchmark for more sophisticated techniques.

**Executive Summary:** A persistence forecast for the September 2012 ice extent based on the July 2012 ice extent anomaly is $4.66 \pm 0.45 * 10^6 \, km^2$.

**Estimate of Forecast Skill:** The correlation between modeled and actual extent, 1986-2011, is 0.9 and the rms is 0.45. The correlation remains high when both time-series are detrended, r=0.61, which suggests that the persistence forecast is capturing inter-annual variability as well as the trend in September ice extent.