

# September 2012 Regional Outlook

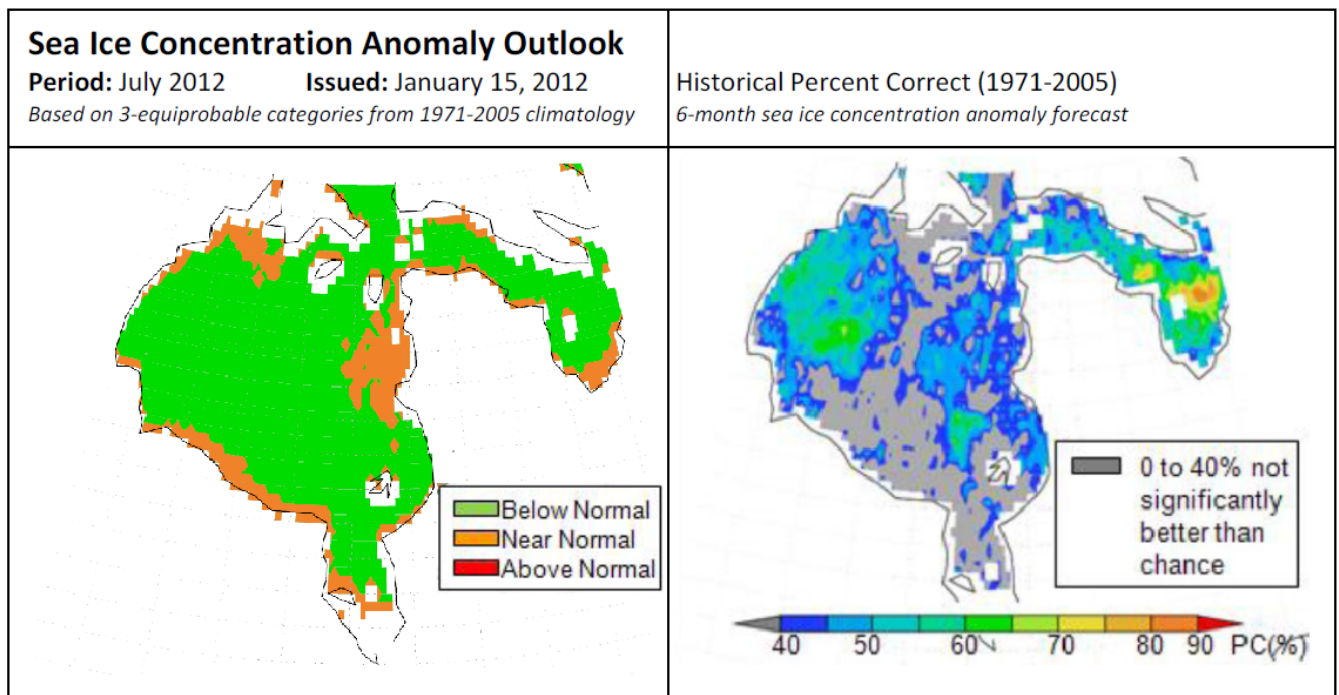
Adrienne Tivy  
*August Update*

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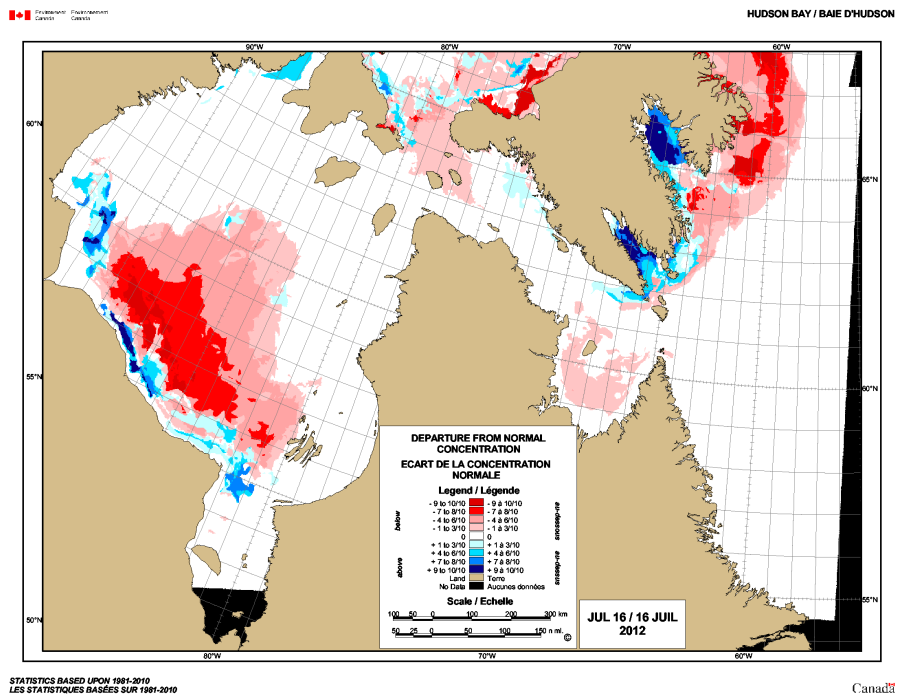
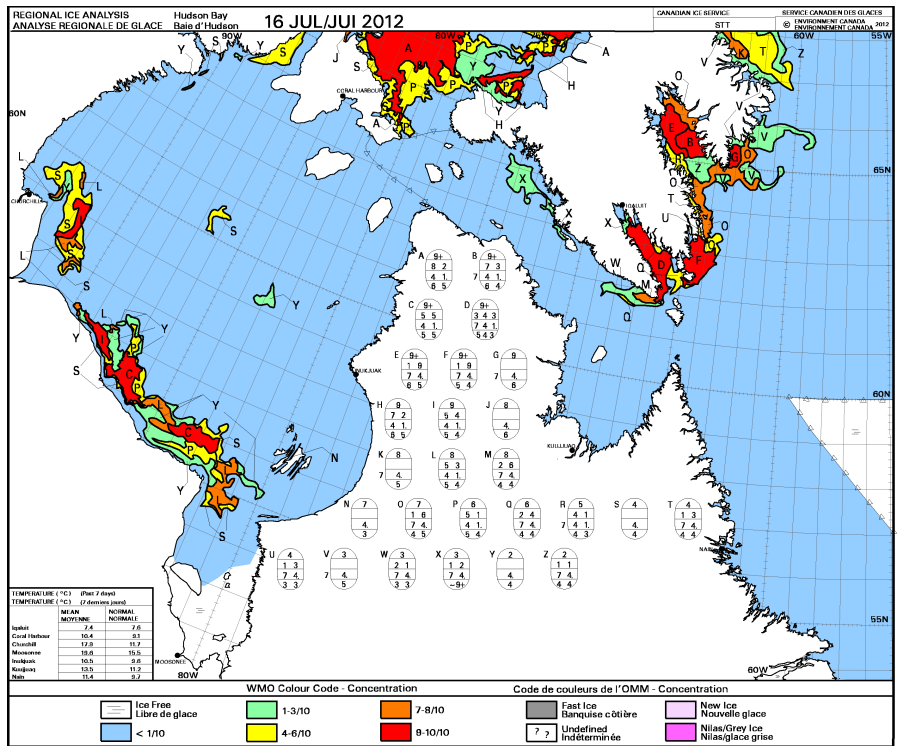
## SHIPPING ROUTE: Arctic Bridge & Hudson Bay

The statistical forecast of July ice concentration anomalies (Figure 1) issued for Hudson Bay in the June Outlook verifies marginally well against the July 16<sup>th</sup> regional ice chart from the Canadian Ice Service (Figure 2). Below normal ice concentrations (red areas in Figure 2b) are captured in the statistical model. Above normal ice concentrations along the south-west coast (blue areas in Figure 2b) are compared to near-normal in the model.

The July 30, 2012 regional ice chart (not shown) reports the region as essentially ice-free. The clearing of the shipping route through Hudson Bay was near-normal this year.



**Figure 1.** Sea ice concentration anomaly outlook for July 2012 in Hudson Bay



STATISTICS BASED UPON 1981-2010  
LES STATISTIQUES BASÉES SUR 1981-2010

Canada

Figure 2. Jul-16-2012 regional ice chart from the Canadian Ice Service (top) and the associated departure from normal chart (bottom).

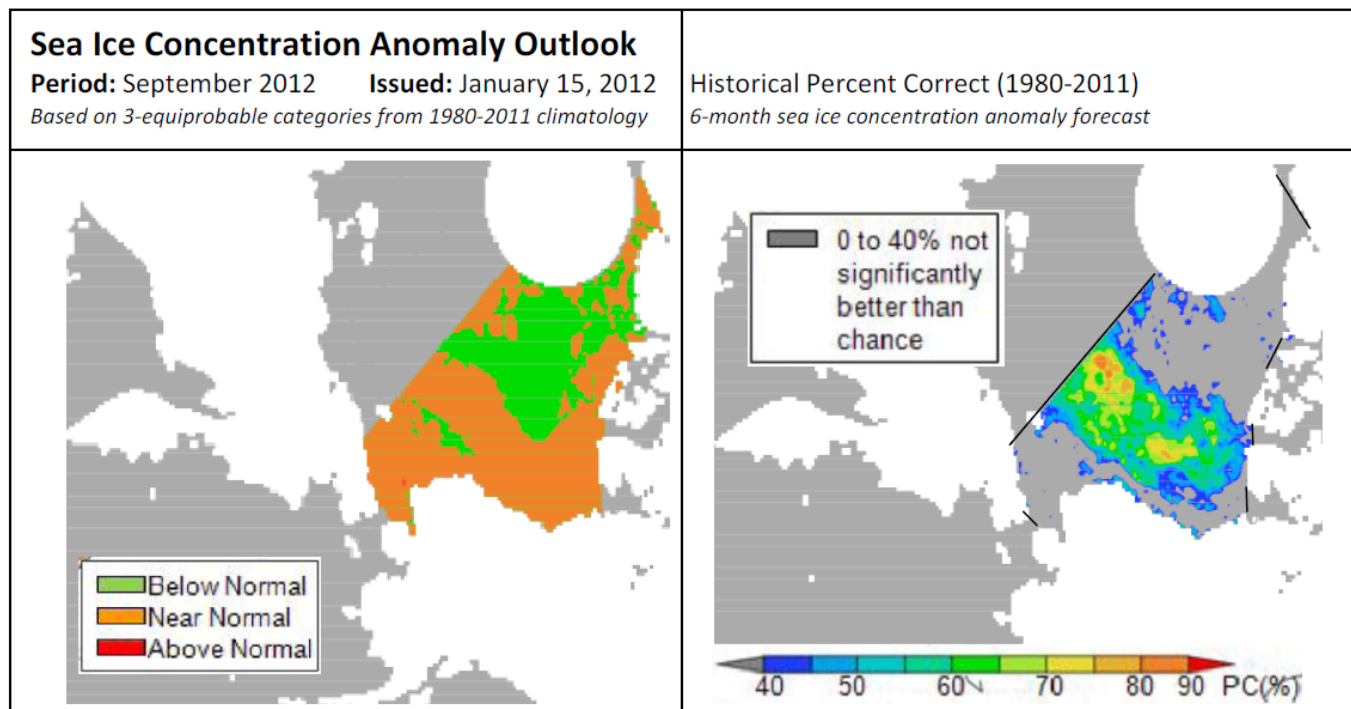
**REGION: Beaufort Sea**

***UNCHANGED***

Sea Ice Parameter: September ice concentration anomalies

Methods/Techniques: Canonical correlation analysis with one predictor: Fall (Oct-Nov-Dec) Surface Air Temperature over the Beaufort Sea (60-90N, 150-250W). The methodology follows: *Tivy, A., S. E.L. Howell, B. Alt, J. Yackel and T. Carrieres (2011). Origins and levels of seasonal forecast skill for sea ice in Hudson Bay using Canonical Correlation Analysis. Journal of Climate. doi:10.1175/2010JCLI3527.1*

Estimate of Forecast Skill: The cross validated hind-cast skill of the model is used as an estimate of forecast skill. It is evaluated as the number of times the model correctly categorized ice concentration anomalies at each grid point as above normal, near normal or above normal.



**Figure 2.** Sea ice concentration anomaly outlook for September 2012 in the Beaufort/Chukchi Seas