Projected surface temperature changes for the late 21st century (2090-2099). The map shows the multi-AOGCM average projection for the A1B SRES scenario. Temperatures are relative to the period 1980-1999. Source: IPCC Climate Change 2007 **www.fs.fed.us/.../climate-change-primer.shtml**.

Exercise 7. Multiple Regression
Due date: October 22, 2013

*E-mail a single Word document with your results to both Instructors. All analytical work needs to be done in R. Scripts and output from R should be included for full credit.

1. Using R, the data in the file `paruelo.txt`, and following the protocol learned on the demo, run the regressions and calculate the AIC for:

a) All possible models including the predictor variables **LAT and LONG** and the response variable C4 plants (2 points).

b) All possible models including the predictor variables **MAT and MAP** and the response variable C4 plants (2 points).

Remember to square root transform and center the predictor variables, and DO NOT MIX geographic with climatic variables.

c) Which model is the best to describe the relationship between environmental variables and the proportion of C4 plants? What does the model tell us? Justify your decision using AIC scores and regression results (2 points).

2. Repeat the analysis of your best model with a Bayesian approach, do you find any important differences in the numerical results or the conclusions (2 points)?

3. Discuss your results in the context of global warming (2 points).