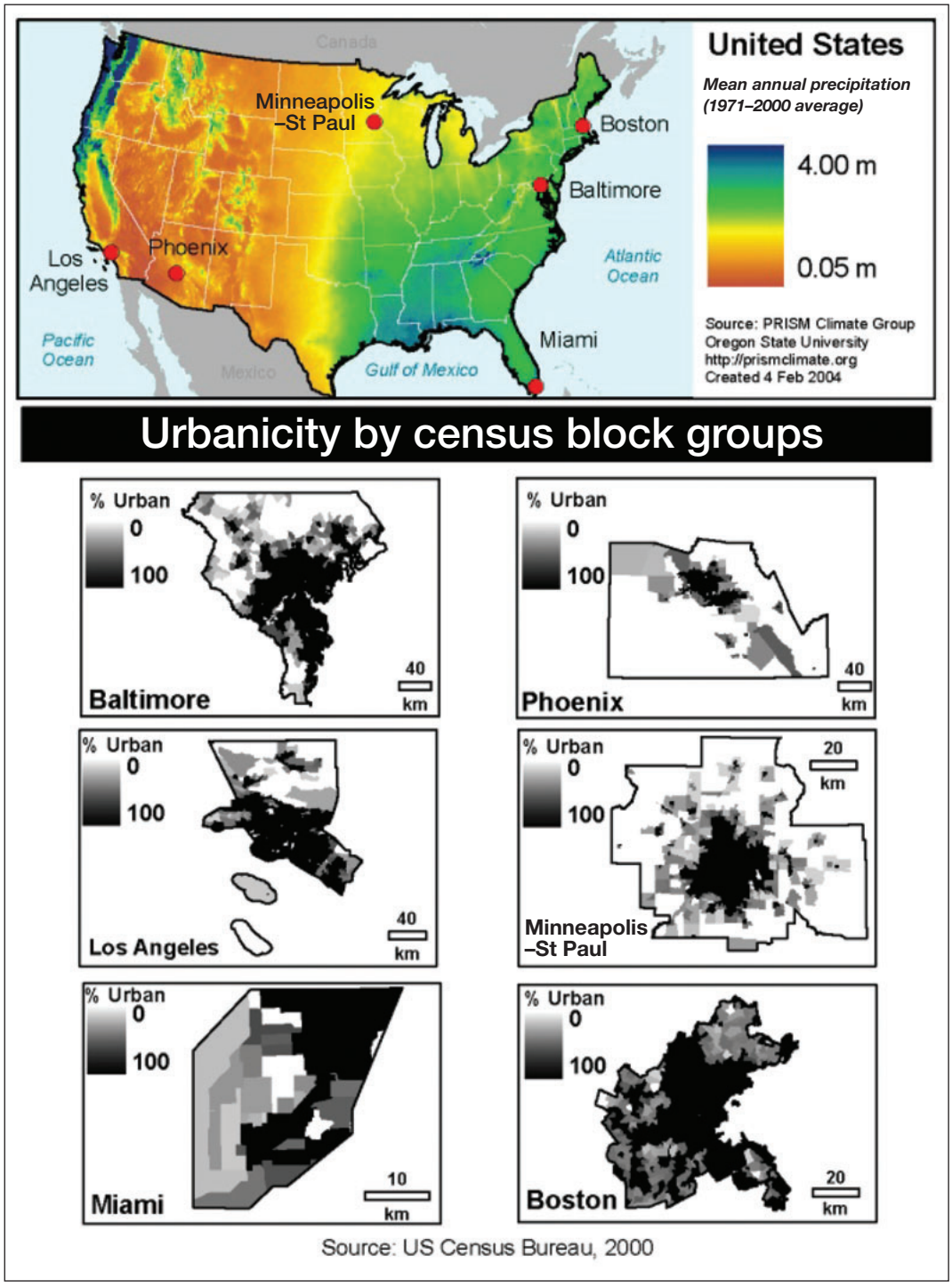
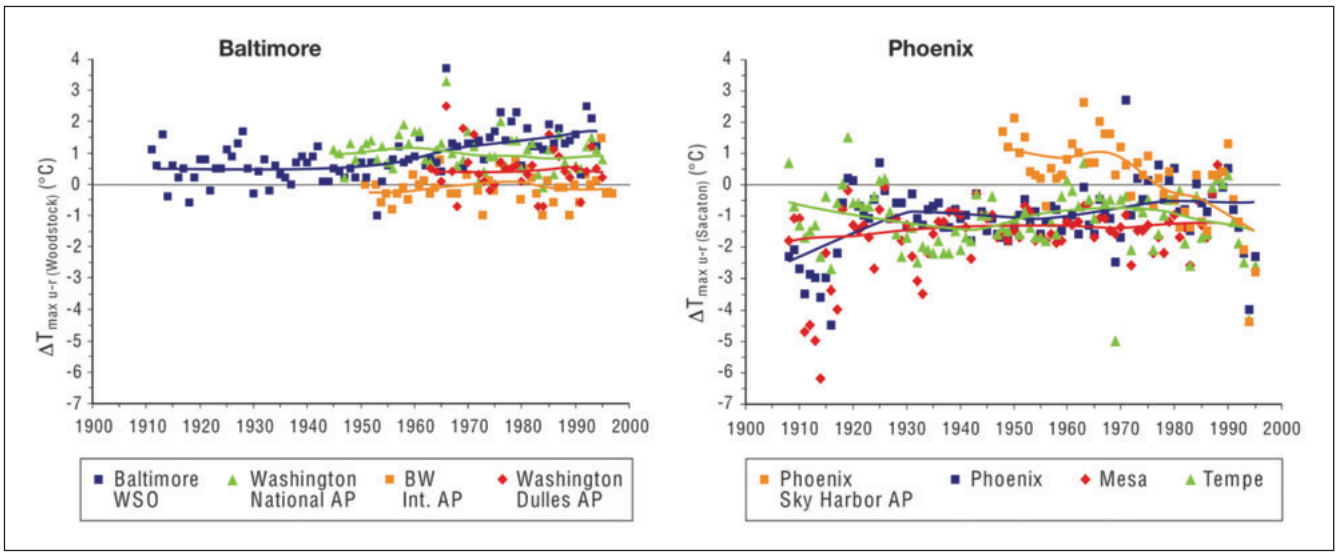
WebPanel 1. Author contributions

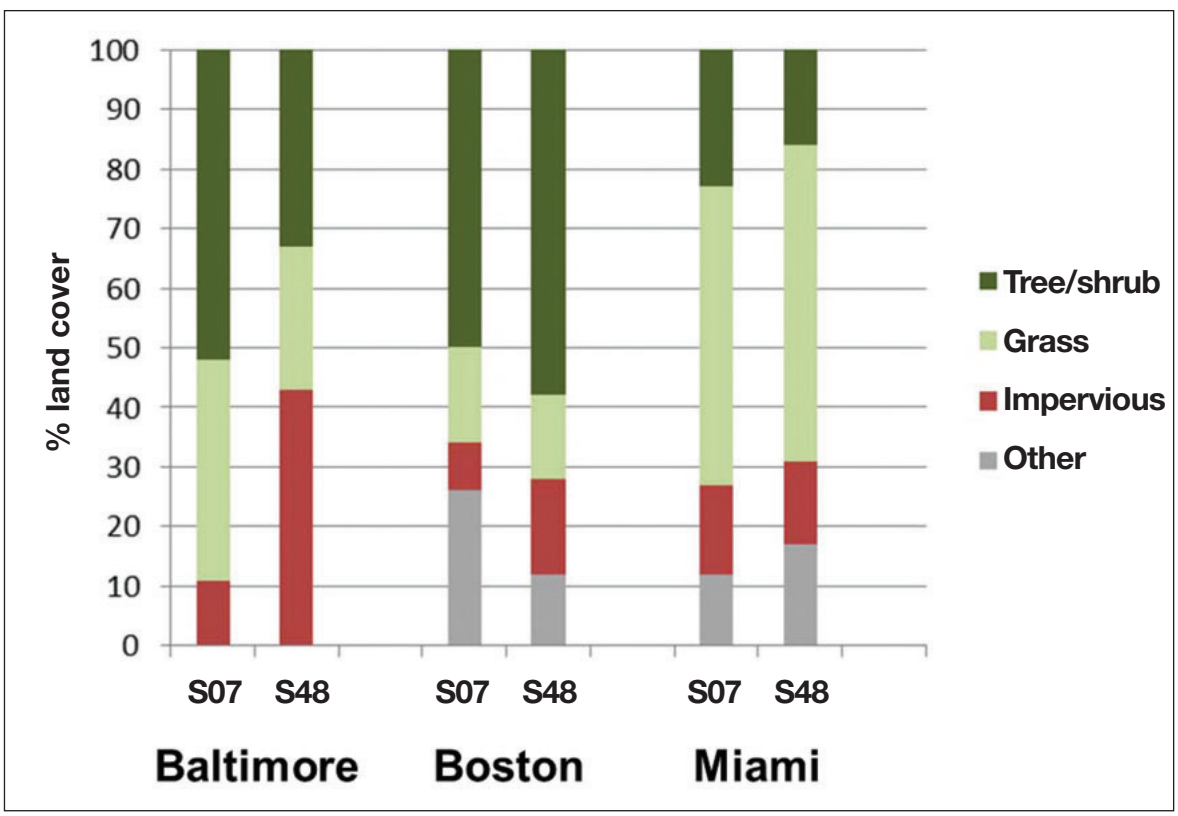
PMG co-conceived and co-developed the idea for the manuscript, co-refined the intellectual content and scope, edited all drafts, prepared the final version of the manuscript, and facilitated the gathering of contributions. JC-B and SH contributed material on vegetation, and LO, KLL, RRC, CP, and JMG contributed material on social science. JBH and MKS contributed material on hydrography, and SJH contributed material on microclimate. RRC and JOD contributed material on land-cover mapping. NDB, JLM, CN, KN, and DEP contributed expertise on specific research sites and overall concepts.



WebFigure 1. *Study sites across the continental climate gradient (top) and urban land use in the six study metropolitan statistical areas (bottom).*



WebFigure 2. *Differences in monthly average maximum air temperature between urban and rural locations within the Baltimore and Phoenix metro areas. Positive values (> 0) indicate higher maximum temperatures inside the city compared to outside the city. Negative values (< 0) indicate the opposite (urban maximum temperature is less than rural maximum temperature). While Baltimore generally shows urban heating, Phoenix shows urban cooling due to the presence of irrigated landscapes and urban trees ("the oasis effect"). Data shown are from July (Baltimore) and May (Phoenix). Figure from Brazel* et al. *(2000). AP = airport; Baltimore WSO = a weather station located in the downtown area at the head of the Inner Harbor in the city.*



WebFigure 3. *Relative areal proportions of four land-cover types maintained in a selection of census block groups representing an affluent, urban sociodemographic household segment (S07) and a low-affluence, exurban sociodemographic household segment (S48) in Baltimore, Boston, and Miami. "Other", mainly bare soil and water, refers to land cover that does not fit into the remaining categories.*

WebReference

Brazel A, Selover N, Vose R, and Heisler G. 2000. The tale of two climates – Baltimore and Phoenix urban LTER sites. *Clim Res* **15**: 123–35.

