Appendix 4: SLF indicator data selection

Indicator data were derived in tabular and spatial (ArcMap shapefiles) from a variety of sources (Table 3). Quantitative and mappable measures were found for most of the high-rated indicators, with the exception of religious or social group participation, access to health facilities, or abundance of fish and wildlife. For the first two, reliable county-level data did not extend through both states. The fish and wildlife abundance indicator was difficult to include at the Albemarle-Pamlico basin scale because there is no single provider of these data. The inclusion of many sources of data could potentially lead to wide uncertainty in the watershed scale assessment, so forested land and open space was used as a proxy.

Natural capital indicators were derived in ArcMap 10.0 (ESRI 2010) using the National Agriculture Statistical Survey cropland dataset (2009) for forest and open space cover, National Hydrography Data Plus (2006) for waterbody area and drainage density, and NOAA's medium resolution shoreline data (2000) for proximity to the ocean. Forest cover, open space, waterbody area, stream and river length, and shoreline length were summed for each county using a series of geoprocessing tools, including *intersect* with county boundary shapefile, *summarize* by attribute, and *join* summary results to county boundary data. Waterbody area, drainage density, and shoreline length were equally weighted and combined into a single indicator of proximity to water. *Field calculator* was used to rescale indicator values and created maps of all 10 indicators, five capital measures, and the composite HWB with and without weighting.

The researchers standardized county-level data for each indicator on a scale of 0 to 1 to compare among indicators (Equation 3). This allowed us to apply the aforementioned weighting equation (Equation 2) using the ranks assigned by workshop participants.

$$Scaled\ indicator\ value = \frac{value\ observed - minimum\ observed\ value}{maximum\ value\ observed - minimum\ observed\ value}$$

Equation 3