Populated shoreline creation:

1. Digitized each district as polygon, attributed with name and population
2. Create district population raster per district (each pixel is assigned the total population of the district)
3. Create building density raster per district (each pixel is assigned the total building density of each district
4. Assign population to each pixel weighted by building density
   a. $$\frac{per\ pixel\ building\ density}{SUM\ building\ density} \times district\ population$$
5. Verified using zonal statistics… Looks Perfect
6. To convert to population per sq. km (cell size = 2.0082 m):
   a. $$\frac{persons}{4.033\ m^2} \times \frac{10^6\ m^2}{1\ km^2}$$
7. Set null where all values are less than 500 → population mask
8. Segmented shoreline by intersecting with (7) population mask:
   a.