

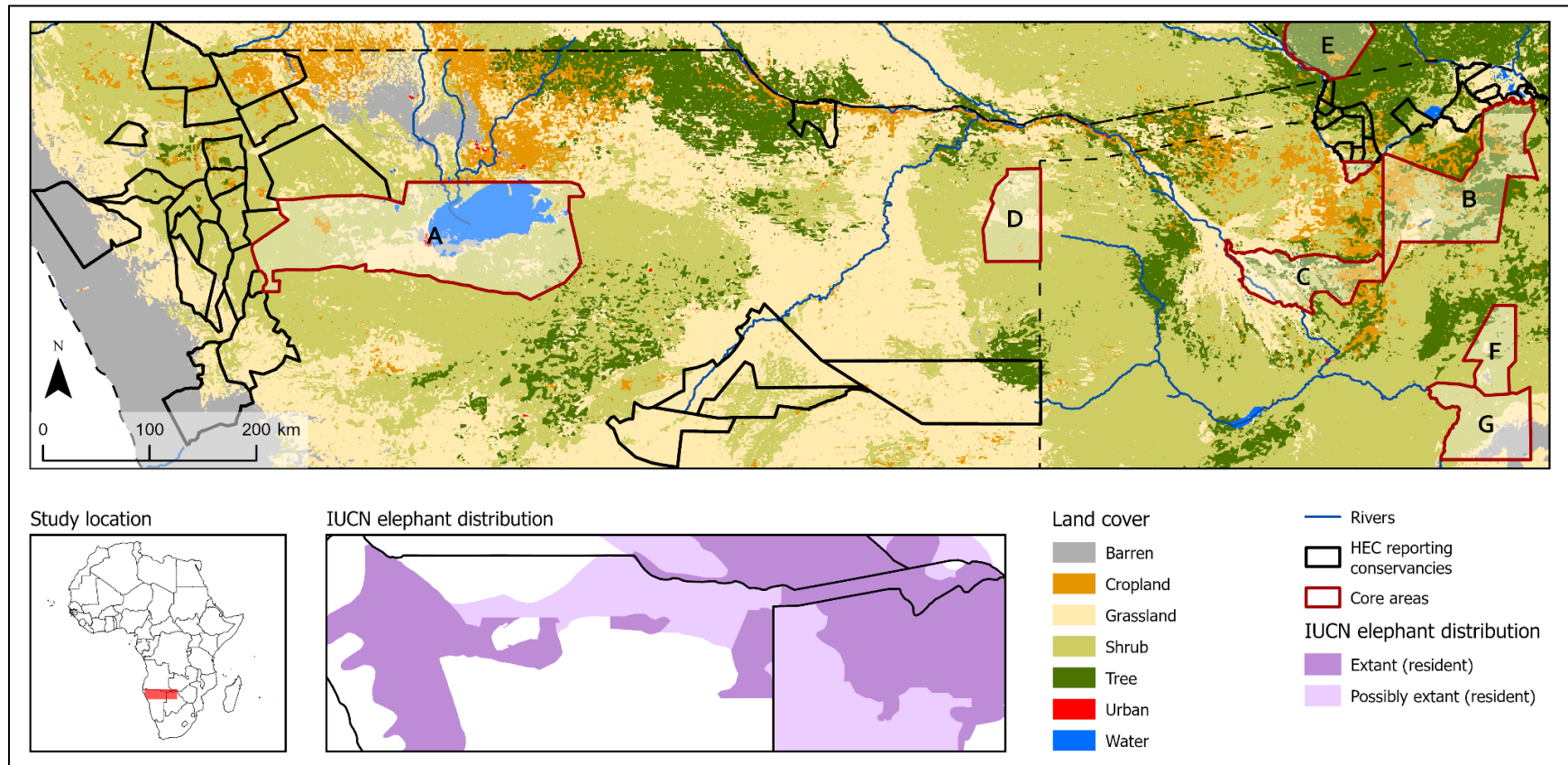
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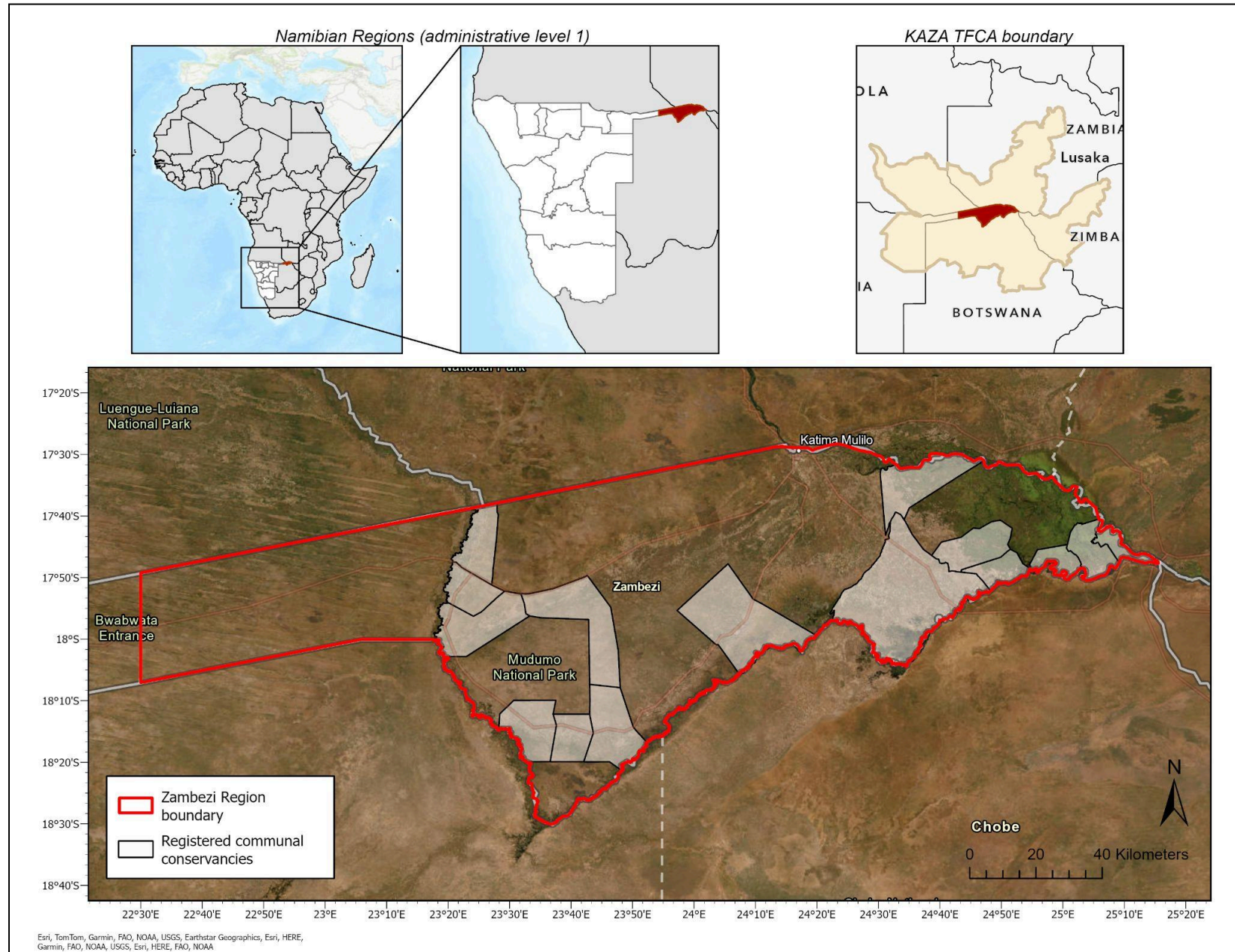
CARTOGRAPHY SAMPLES

The cartography samples below are a collection of maps I have made for different reports, projects, and presentations. Please note that most of these maps are missing titles and descriptions because they were part of technical reports or manuscripts that had accompanying figure captions.

Map #1: Study area figure for a research paper that I'm currently in the process of publishing as the second author. Our study employed a multi-model approach with long-term human elephant conflict (HEC) data from Namibian communal conservancies (black polygons in the map below) to examine the current drivers, hotspots, and future changes in HEC across a Southern Africa landscape. This map aims to orient the reader to our study location, some of the key environmental predictor variables used to model HEC, and other data layers for additional context.

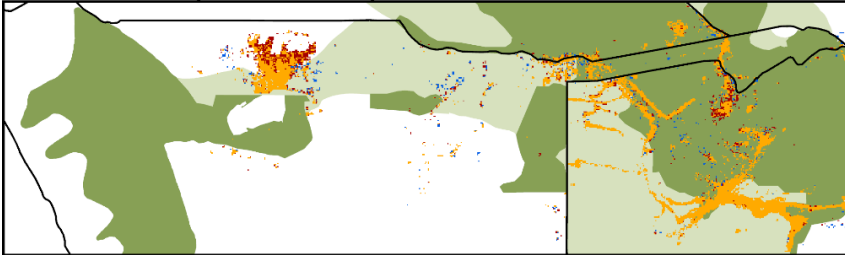


Map #2: Overview of the Zambezi Region in Namibia, a key region of interest within the study area of the HEC research project I described in Map #1.

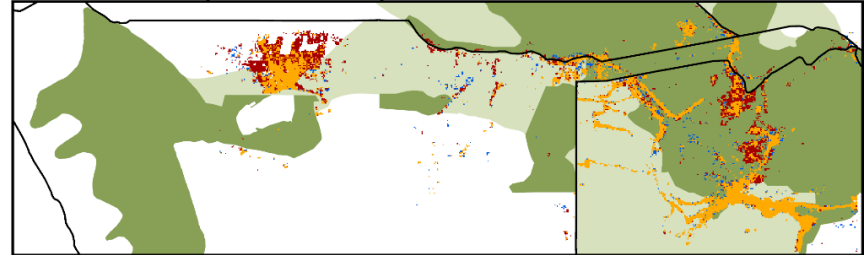


Map #3: One of the primary figures as part of the same study as Map #1 and #2. This shows the change in the distribution of crop raiding human-elephant conflict (HEC) during the wet season from 2025 to 2055 and from 2025 to 2085 under two future scenarios – SSP1-RCP2.6 (“sustainability”) and SSP3-RCP7.0 (“regional rivalry”). Continuous HEC predictions were converted to binary outcomes (presence or absence of HEC) using the threshold (0.72) that maximized Cohen’s Kappa for the MaxEnt model. African elephant distribution from the IUCN is overlaid to compare model results with extant (dark green) and possibly extant (light green) delineations. All regions not colored in the figure were consistent “coldspots” of HEC (i.e., areas with an HEC probability less than 0.72 in both periods being compared).

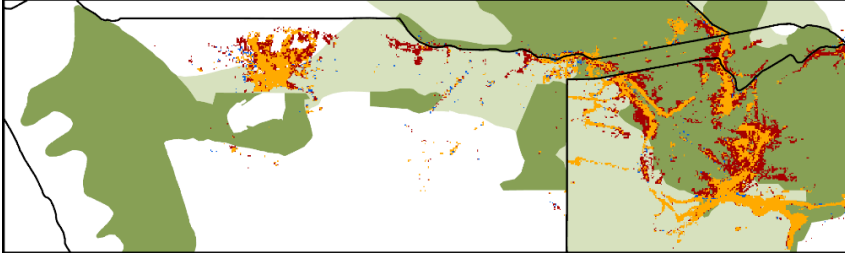
SSP1-RCP2.6 (2055 - 2025)



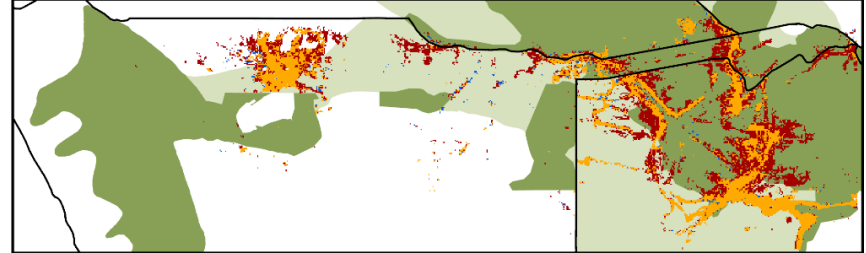
SSP1-RCP2.6 (2085 - 2025)



SSP3-RCP7.0 (2055 - 2025)



SSP3-RCP7.0 (2085 - 2025)



0 200 400 km



Change in HEC

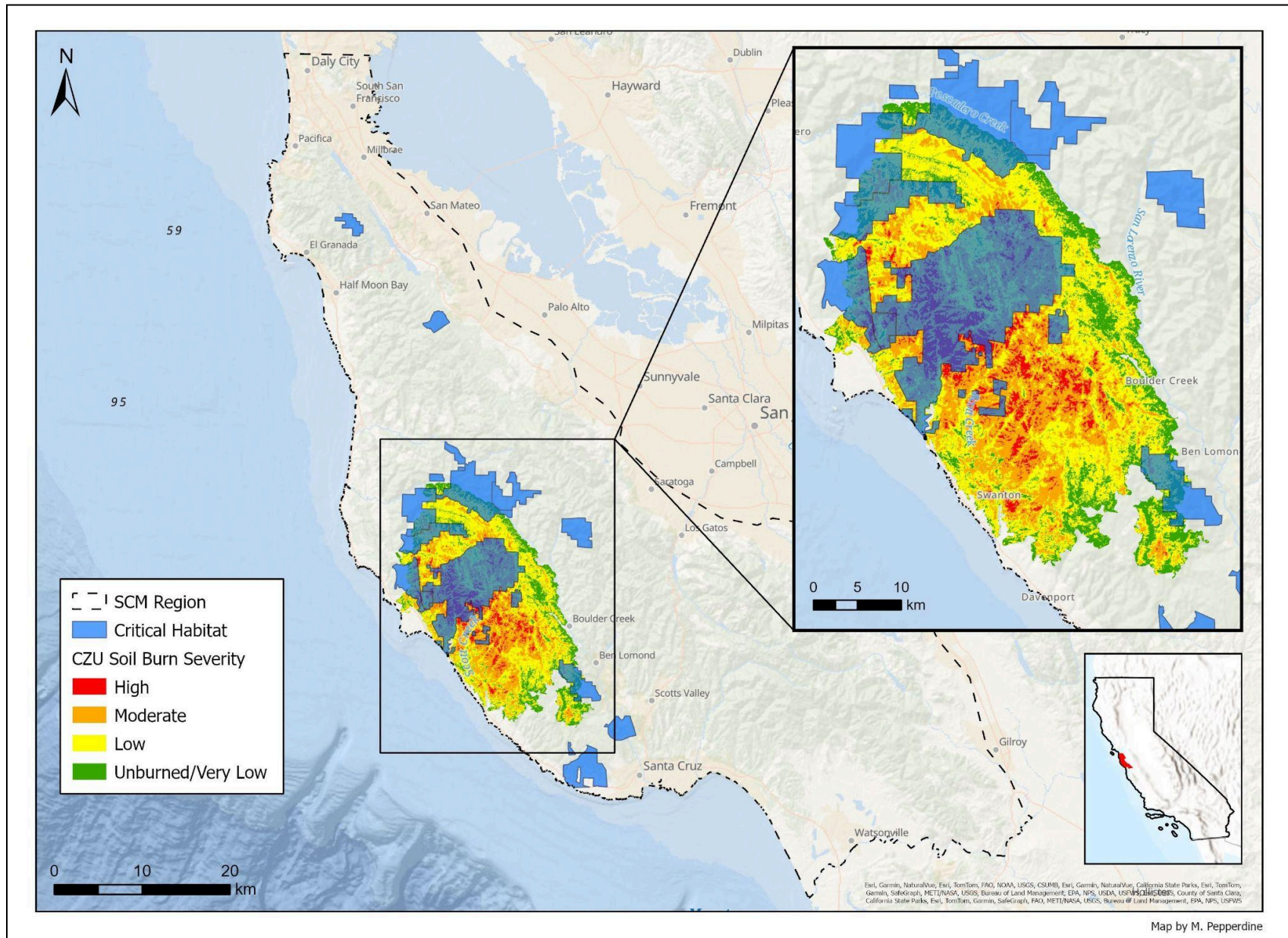
- Decrease
- No change (hotspot)
- Increase

Elephant distribution

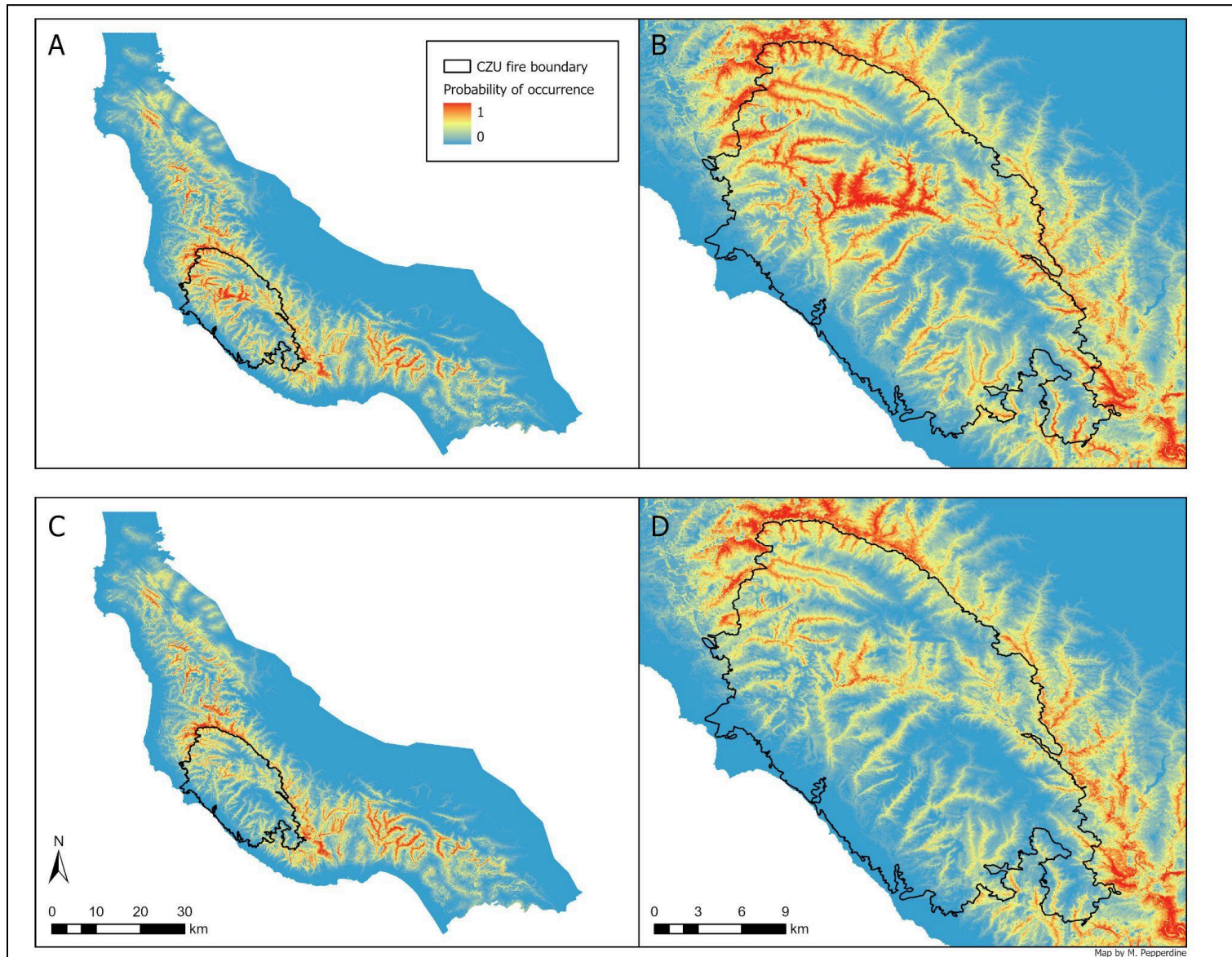
- Extant (resident)
- Possibly extant (resident)



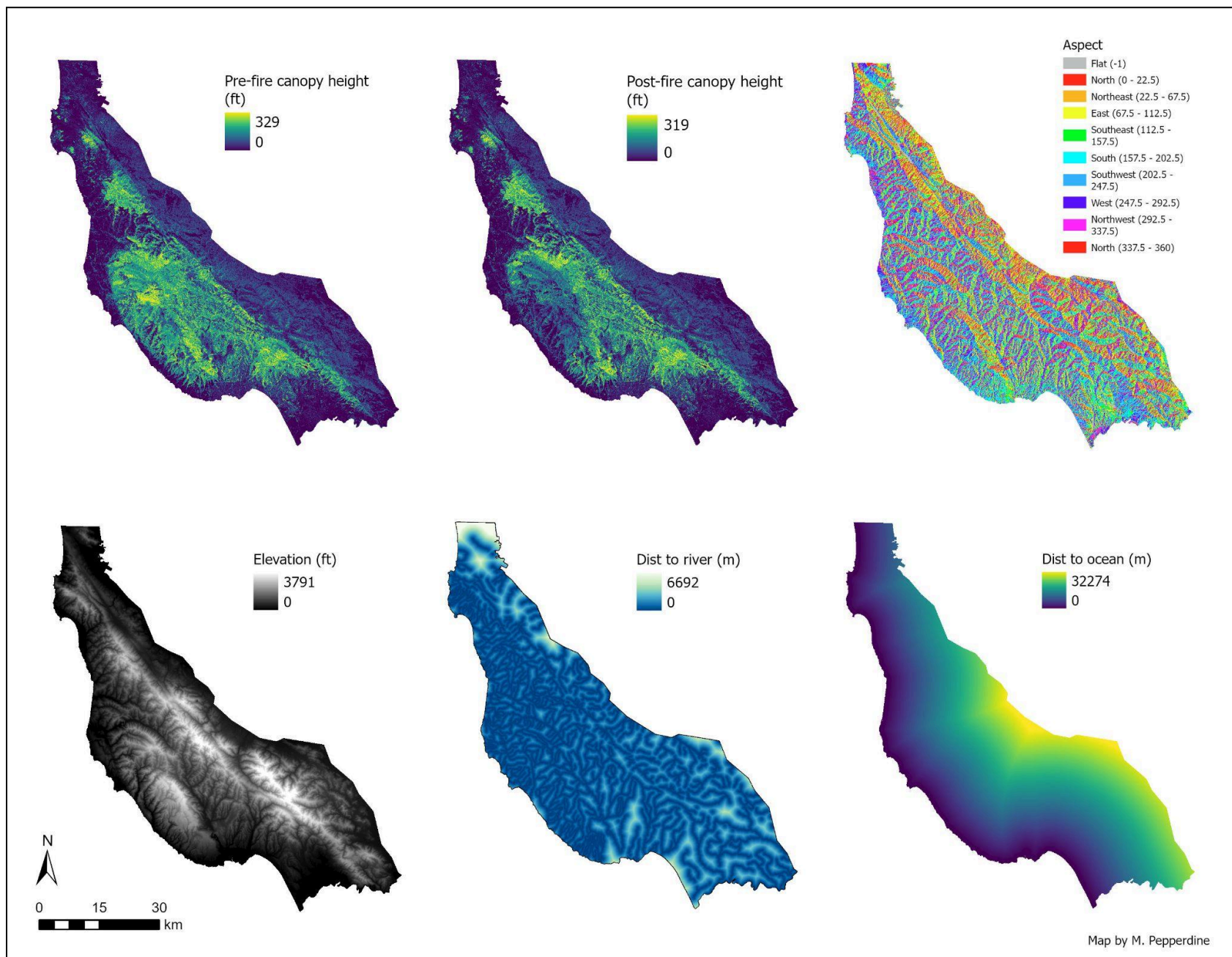
Map #4: Overlaying marbled murrelet critical habitat designations with the CZU wildfire burn severity to visualize impacts on this endangered species' nesting habitat.



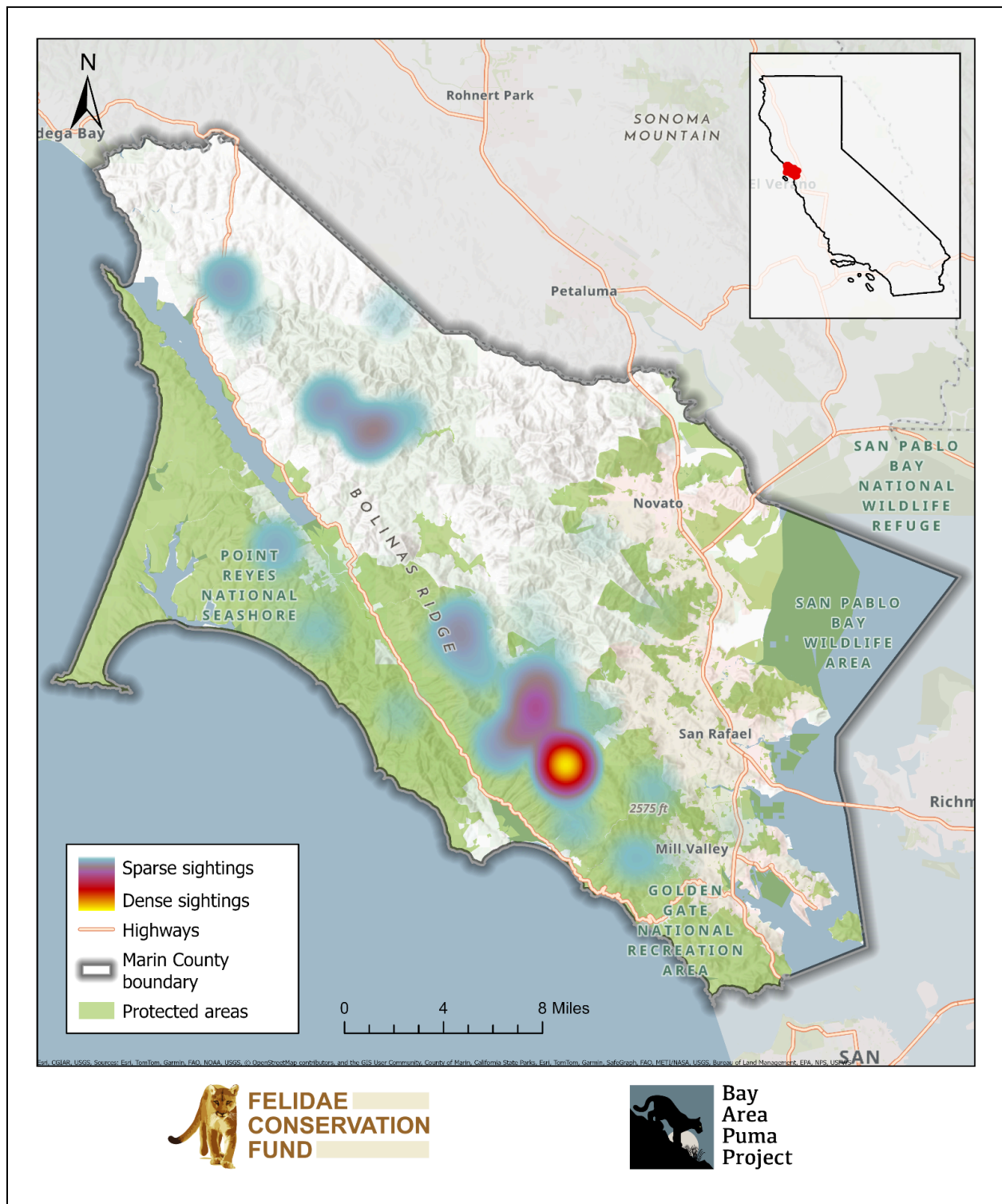
Map #5: Results of MaxEnt modeling efforts that generated a species distribution model to predict the probability of occurrence for marbled murrelets throughout the Santa Cruz Mountain region. The top maps (A/B) display the occurrence probability for the model generated using pre-fire occurrence data and vegetation conditions. The bottom maps (C/D) show the predictions of this model transferred to post-fire forest structure conditions.



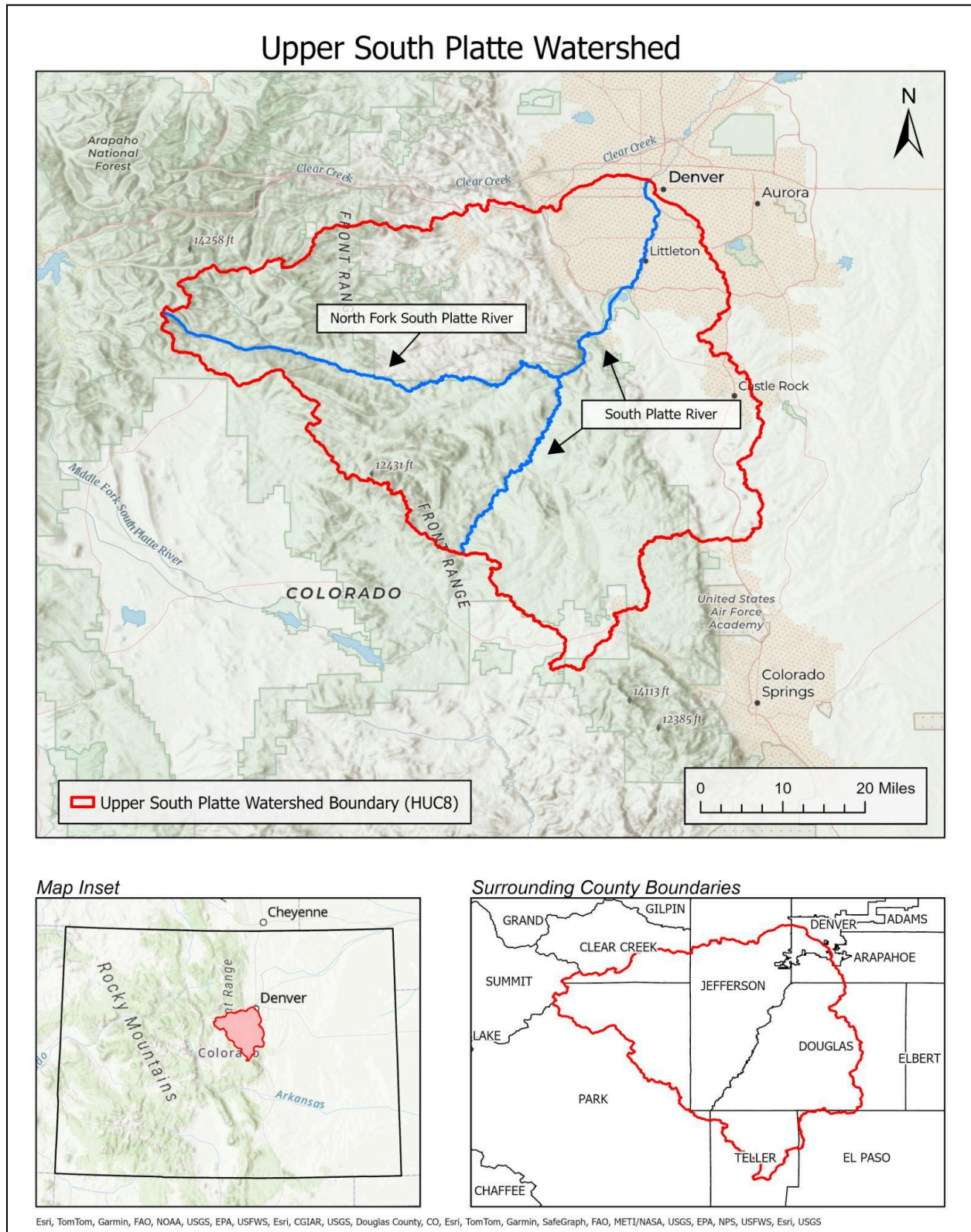
Map #6: Environmental predictor variables that were used to generate the species distribution model in Map #5 above.



Map #7: Heatmap showing the distribution of mountain lion sightings in Marin County, CA. Point data for recorded mountain lion sightings were converted into a heat map. I created this figure for the Felidae Conservation Fund while working as a GIS Volunteer.



Map #8: Overview of the Upper South Platte Watershed in Colorado, the study area of my yearlong master's group project with The Nature Conservancy.



Map #9: EnviroScreen scores at the census tract and block group level within the Upper South Platte Watershed in Colorado.

