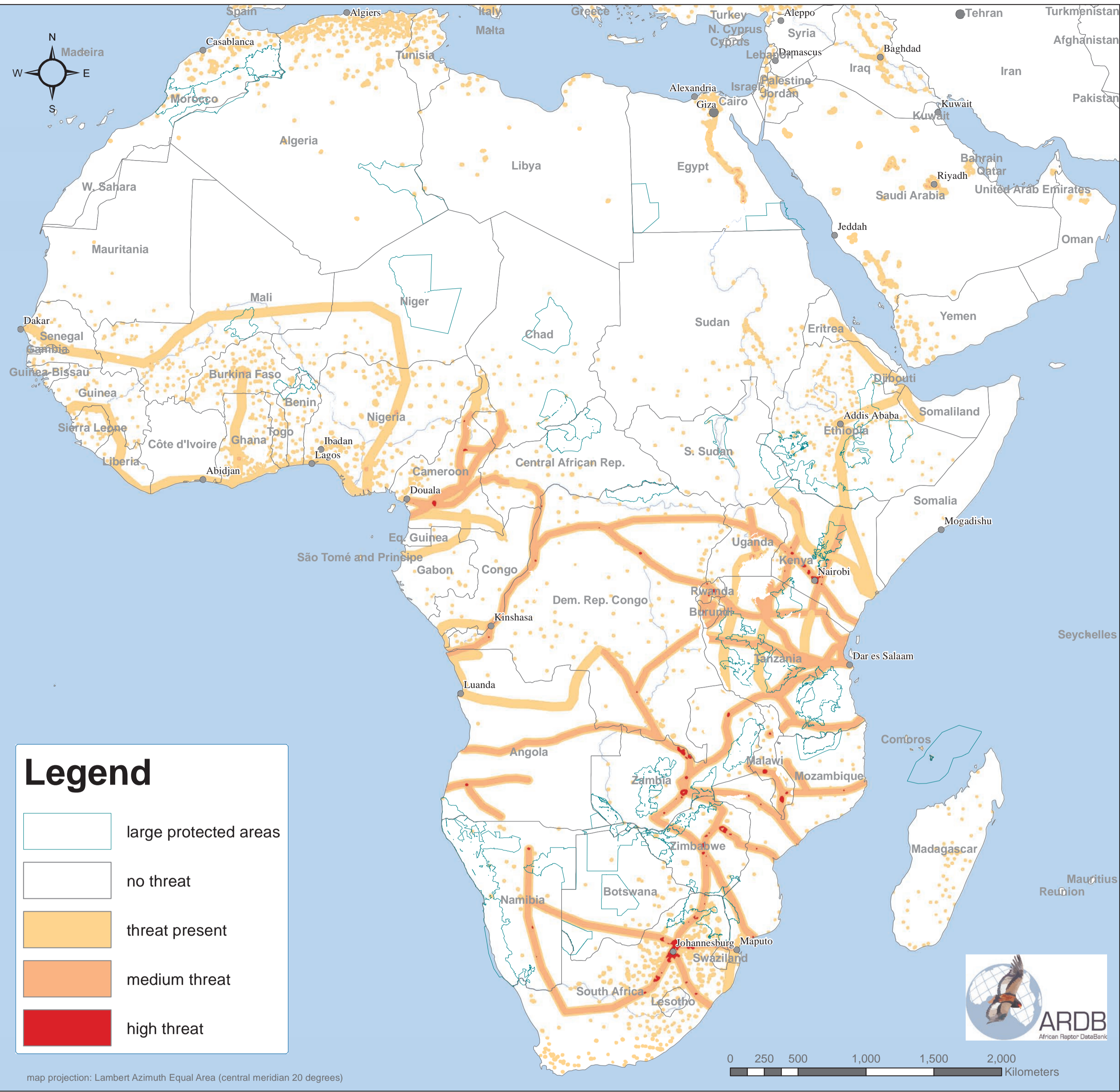


threat map: expected development



Legend

- large protected areas
- no threat
- threat present
- medium threat
- high threat

map projection: Lambert Azimuth Equal Area (central meridian 20 degrees)

0 250 500 1,000 1,500 2,000 Kilometers



METHODS:
 We combine development growth from two datasets: development corridors (Laurance et al. 2015, Sloan et al. 2016) and measures of current urban growth (Habitat Info). Polygons defining major development corridors for Africa were obtained from Laurance et al. These polygons had already been buffered by these authors for appropriate distances considered to reflect the impact effect of major road / rail development in Africa (25km either side to yield a swathe 50km wide). Development corridors were given scores of 1 for proposed corridors and 2 for active or upgrading corridors. Impact zones for urban growth and areas of agglomeration (rural to urban migration) were previously developed by Habitat Info as described in the methods document using national data values for urban population growth for 2000-2015 were obtained from UNDP and attached to polygons of urban areas from the GRUMP urban mask for those countries. Using the assumption that the growth in area of the cities should be proportional to the growth in population size, the outer perimeters of the cities were buffered inside and out by a distance which was correct for that level of percent growth in area. Thus in countries showing more rapid growth the city buffers would be proportionately larger. These halos around the edges of cities are considered to be the zones where negative aspects of agglomeration e.g. slums are concentrated. Urban expansion polygons (pretty tiny on the map) were given scores of 3. These two development area layers were added together and then calculated the average score within 10km which makes the urban polygons more visible with a low score buffer area. The dataset was then reclassified into 4 classes: 0 = no threat, 1 = threat present, 2 = medium threat, and 4 = high threat. This arrangement reveals existing urban growth as hardest development especially where it overlays development corridors, existing development corridors are more dispersed so accorded lower but significant threat value, and future development corridors carry lower threat value in accordance with a lack of certainty.

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