

LEAVE THE LEMURS ALONE

How development is threatening Madagascar's biodiversity

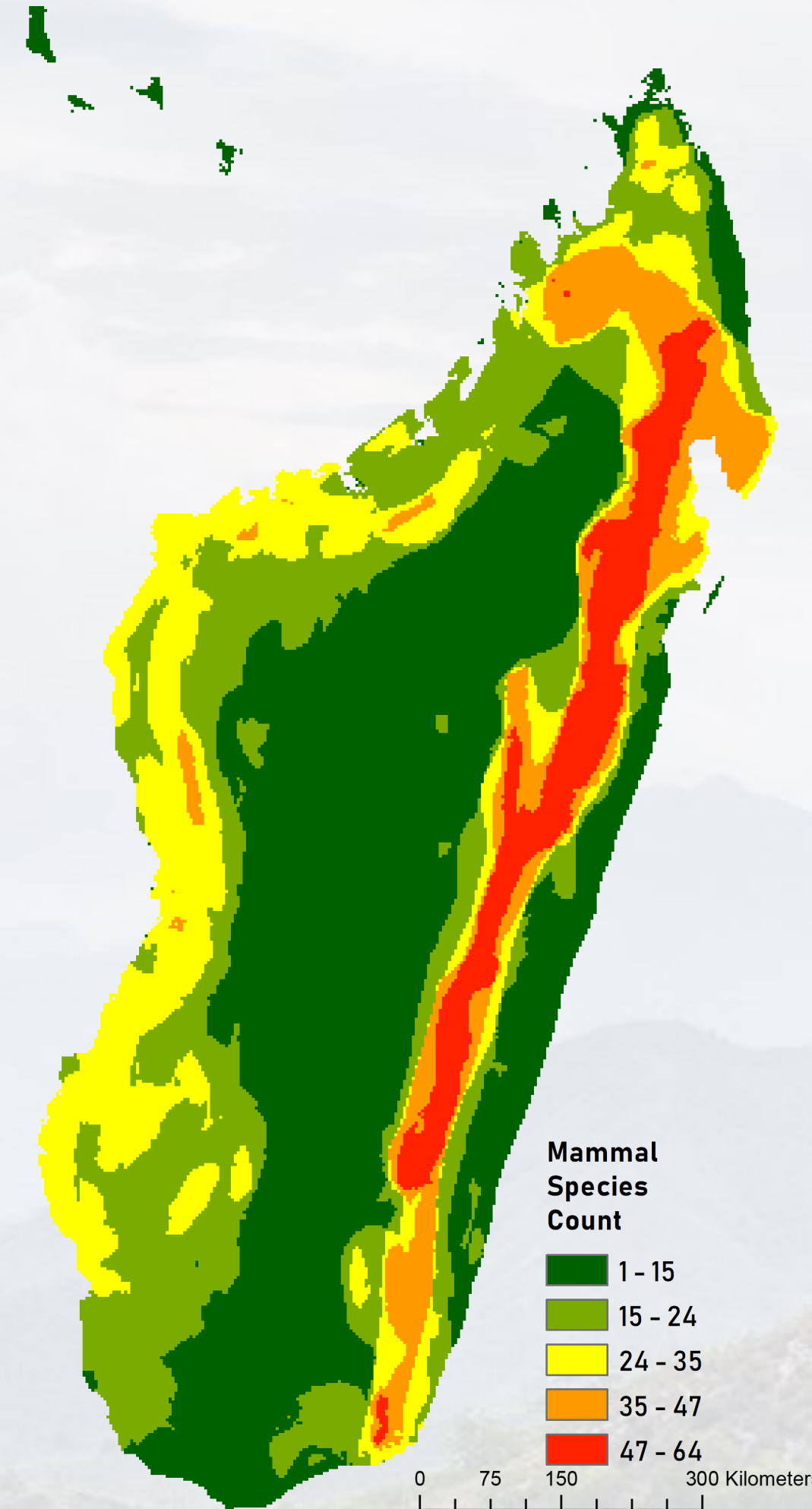
Created by: Alisha Patel
UEP 232 | Intro to GIS
Projection: Universal Transverse
Mercator, Zone 38S

Owing to its distinct geographically cut-off location, Madagascar has had the ability to develop distinct ecosystems and extraordinary wildlife. Madagascar is the world's fifth-largest island and has some of the most fascinating topography, allowing for all kinds of wildlife to thrive. It harbors lush rain forests, deserts, plateaus, dry forests and a 3,000-mile long coastline.



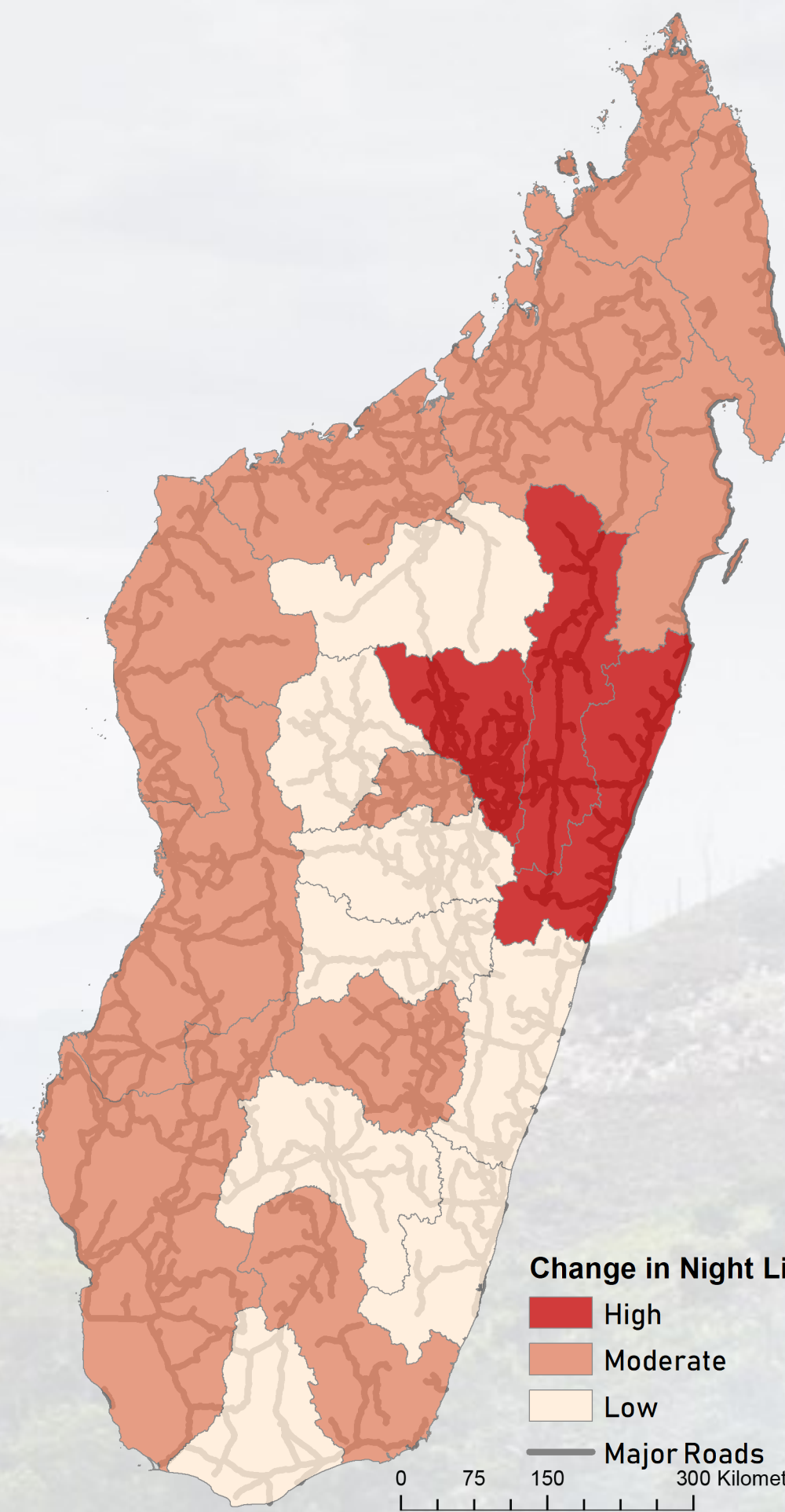
Madagascar is home to 21 million people who come from as diverse a background as the biodiversity here. More than 20 ethnic groups live on this island. Around 80% of the population lives below the poverty line.

Madagascar is one of the world's highest priority biodiversity hotspots.



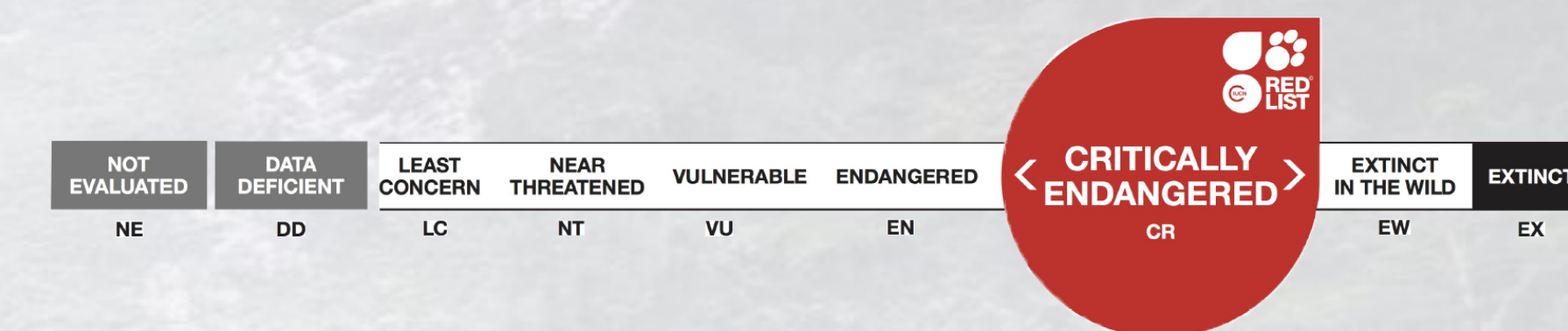
Over 80% of the 200,000 species that Madagascar hosts are endemic to only this island, out of which 111 are primate species. Around 90% of lemur species are at risk of extinction.

Over the years, Madagascar has been developing much like the rest of the world.



I have used night light data from satellites as a development proxy for the years of 1992 and 2013. I then studied the difference between the lights in both years and calculated the change.

The areas of high night light change were matched with areas where mammals listed as Critically Endangered are found. This allowed me to narrow the study down to four lemur species that are in high danger of extinction. A lot of the threats surrounding biodiversity in Madagascar are related to illegal wildlife trade and unsustainable agriculture practices, which stem from the demands of global markets and from the growing needs of the population.



Widespread clearance of forests for fuel, logging and charcoal completely destroy the habitats of the variety of biodiversity found on this island.

Indri indri

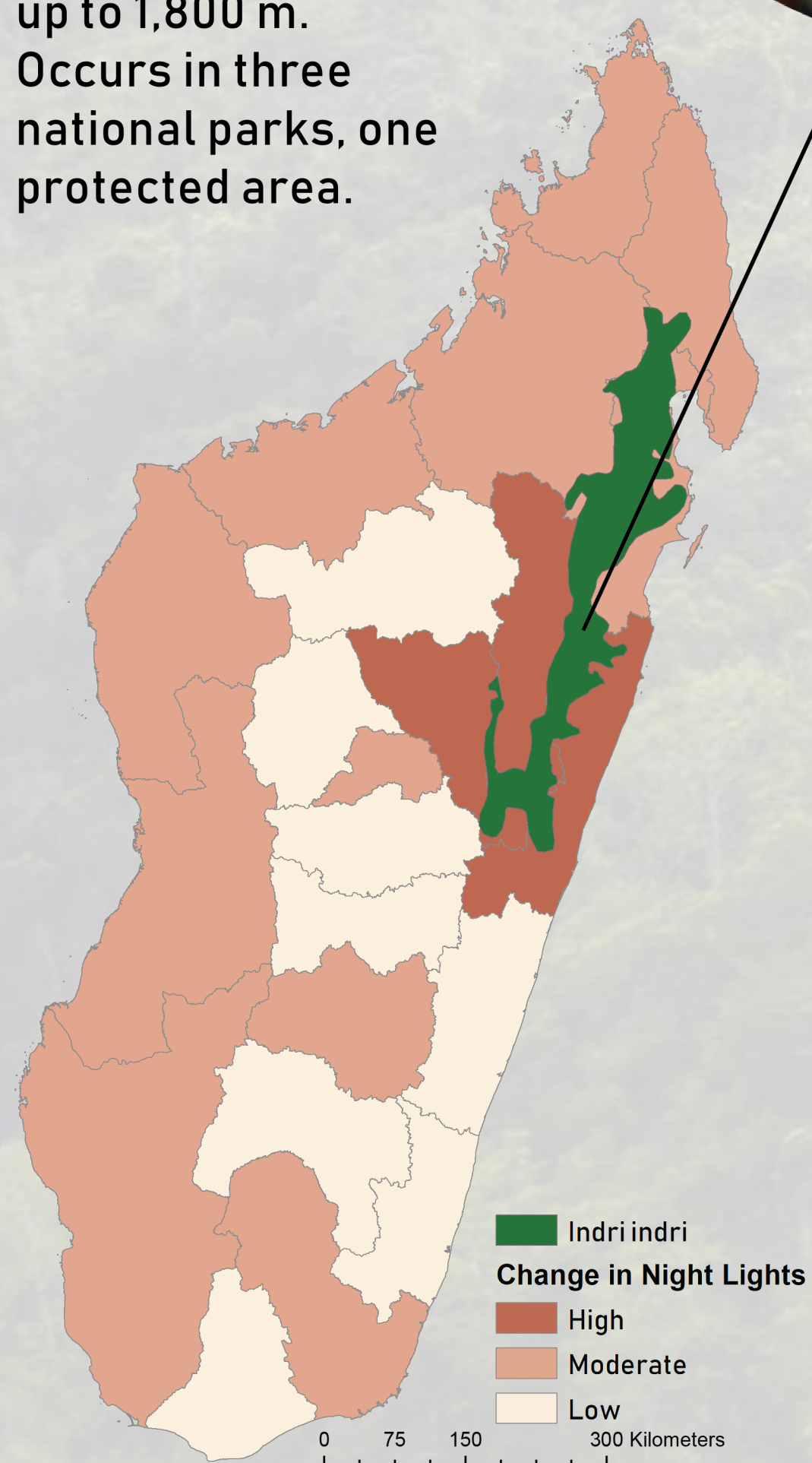
(Common Name: Indri)

Habitat: Eastern rainforests, low elevations, ranges up to 1,800 m. Occurs in three national parks, one protected area.



Use and Trade: Illegal hunting as food. Meat fetches high price. Threats: Slash and burn agriculture, logging, fuelwood gathering

Conservation Actions: Region wide conservation education program to help eliminate hunting. The species does not do well in captivity. The preotected areas need to be more protected.



Propethicus diadema

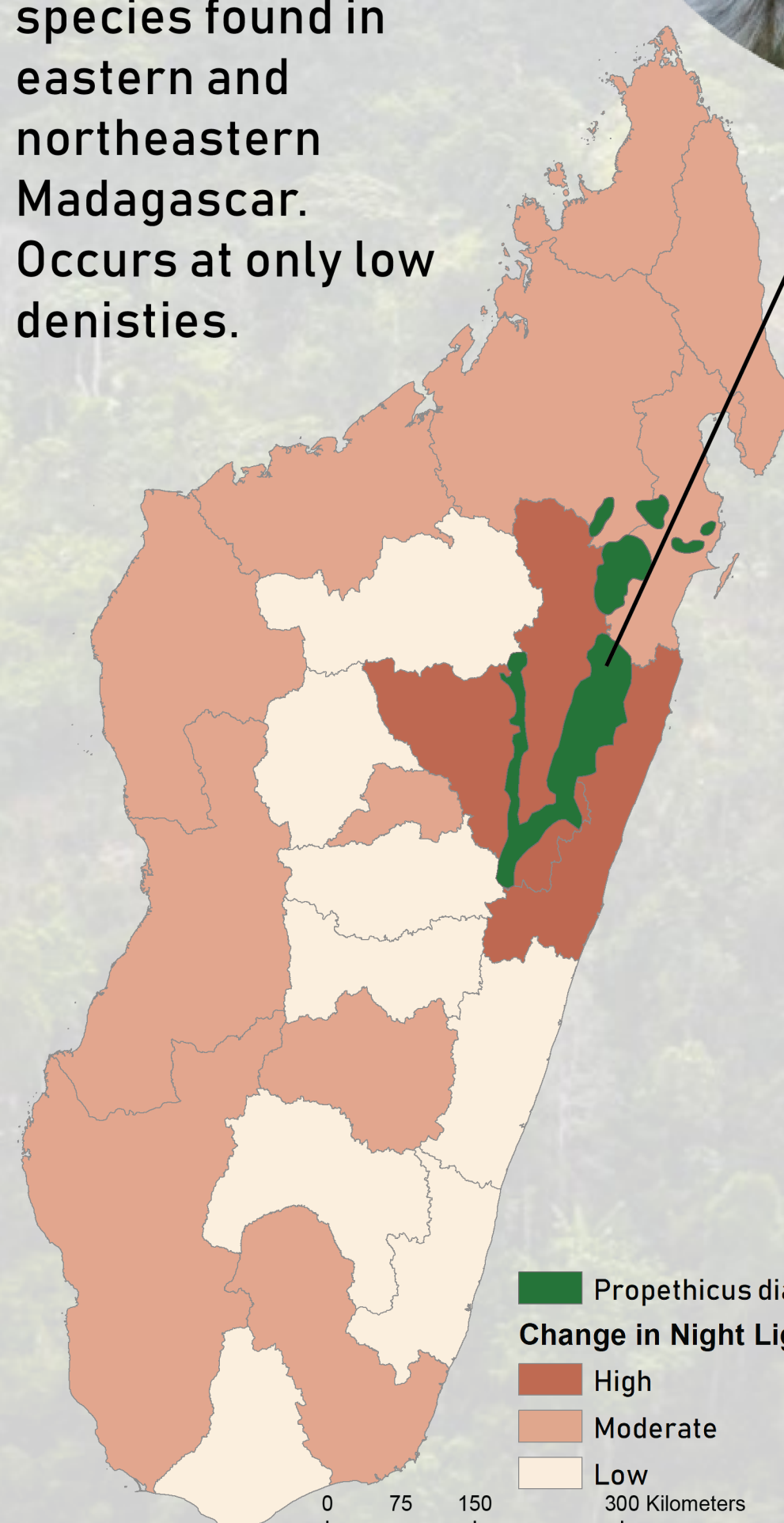
(Common Name: Diadema Sifaka)

Habitat: Rare species found in eastern and northeastern Madagascar. Occurs at only low denisties.



Use and Threats: Meat and fur is highly priced. Illegal rum production, slash and burn agriculture and timber extraction, necessitating planting of sugarcane fields, destructive utilization of sifaka food trees.

Conservation Actions: New protected areas to help conserve remaining populations and serious monitoring of existing protected areas.



Varecia variegata

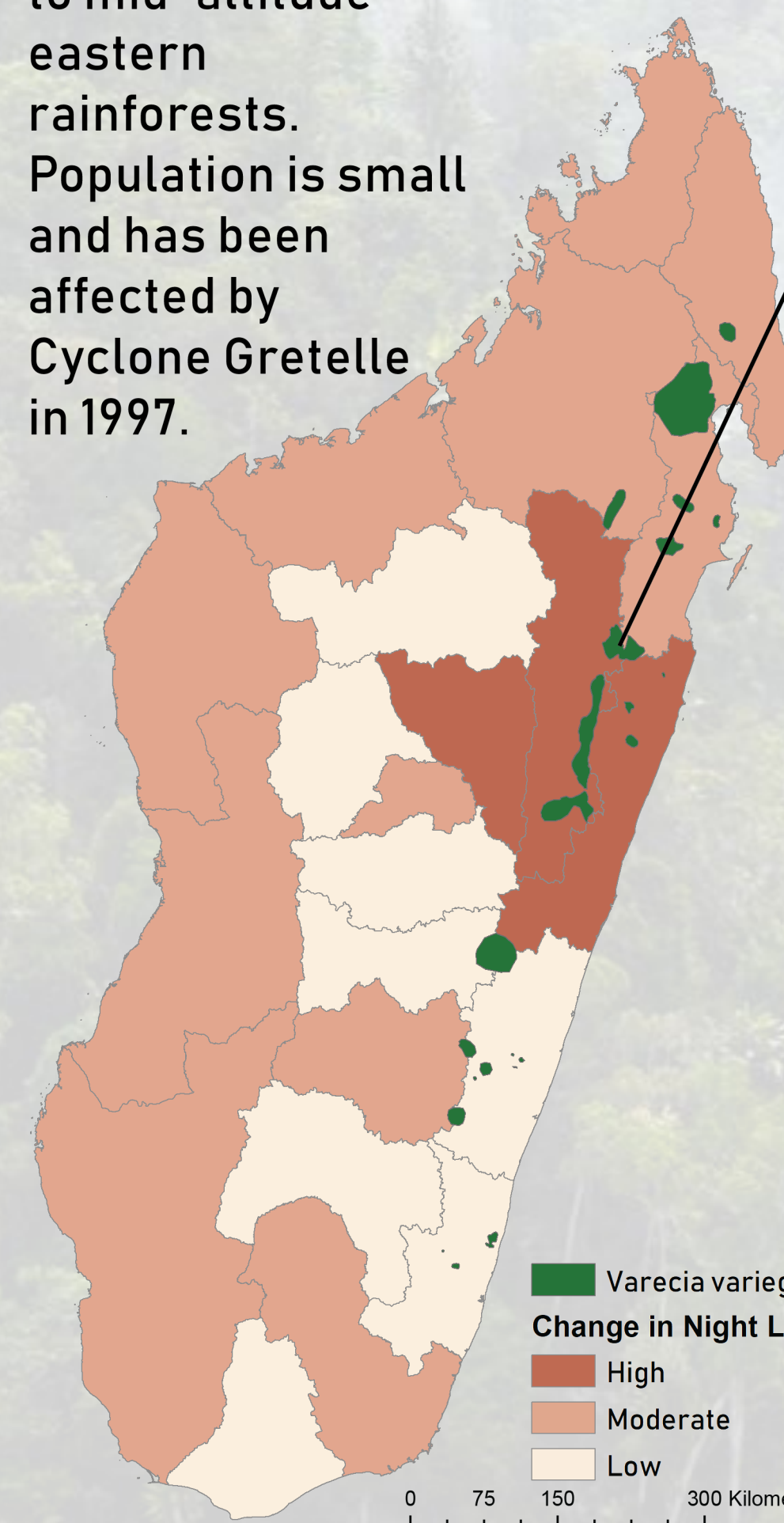
(Common Name: Black and White Ruffed Lemur)

Habitat: Lowland to mid-altitude eastern rainforests. Population is small and has been affected by Cyclone Gretelle in 1997.



Use and Threats: Species is large-bodied and vocal leading to heavy hunting. It has expensive and desired meat. Other threats include slash and burn agriculture, logging and mining.

Conservation Actions: Unprotected forests where they reside should be included in protected areas and an education campaign against hunting is recommended.



Hapalemur alotrensis

(Common Name: Alaotra Reed Lemur)

Habitat: Known only from marshy papyrus and reed beds surrounding Madagascar's largest lake, Lac Alaotra, in the eastern rainforest region.



Use and Threats: Conversion of marsh habitats to rice fields. Burning of remaining marshlands takes place for fishing and to graze cattle. They are also hunted for food and captured as pets.

Conservation Actions: Regional fishing convention bans lemur hunting and marsh burning. Stronger implementation is needed. Stronger public awareness campaigns are also needed.

