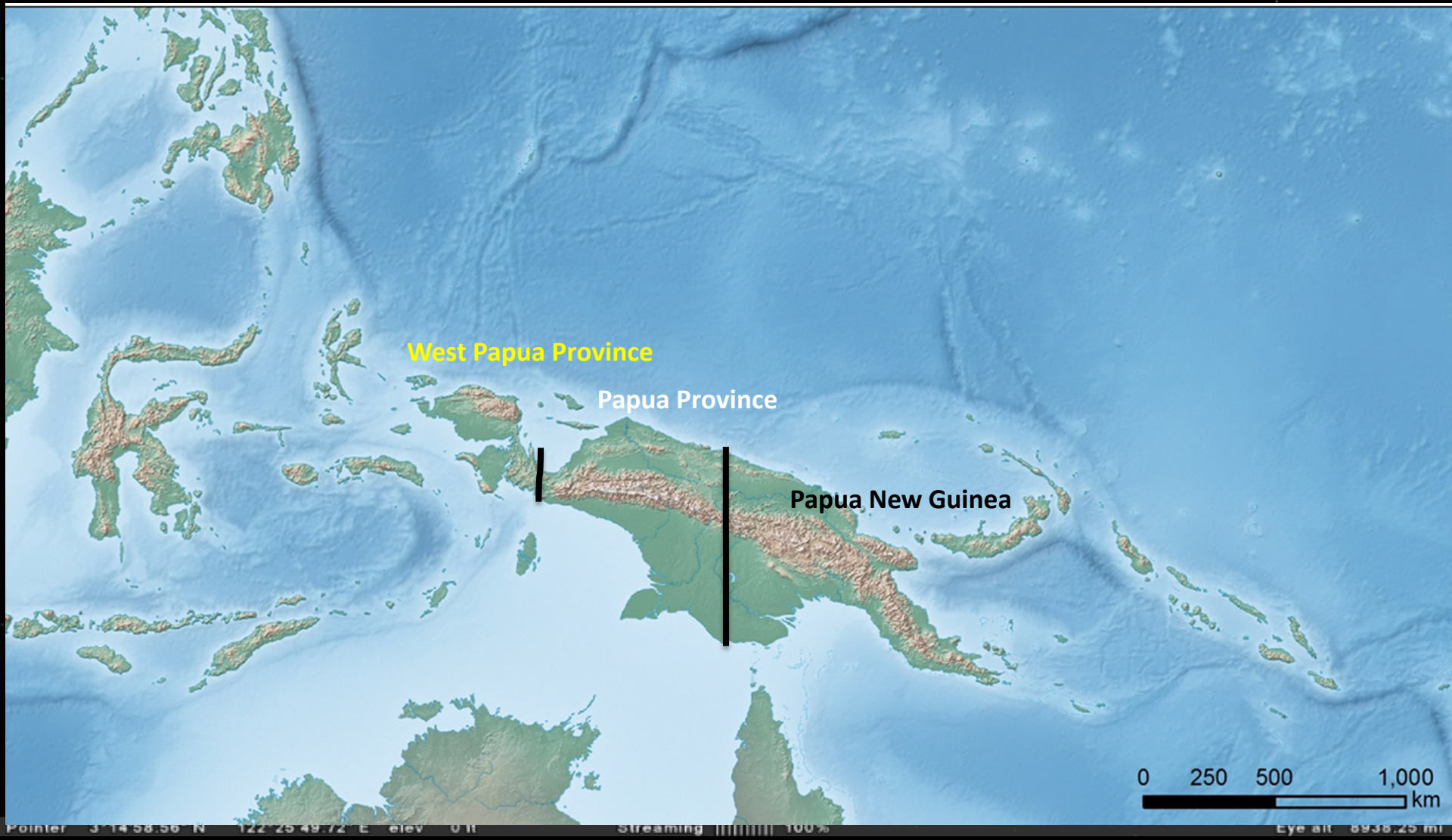
Biodiversity and Conservation in Indonesian New Guinea: An update

Charlie D. Heatubun

Research and Development Agency of the Provincial Government of West Papua, Indonesia, Universitas Papua, The Royal Botanic Gardens Kew, UK, IUCN Species Survival Commission – the Palm Specialist Group & the Fresh Water Plant Specialist Group.

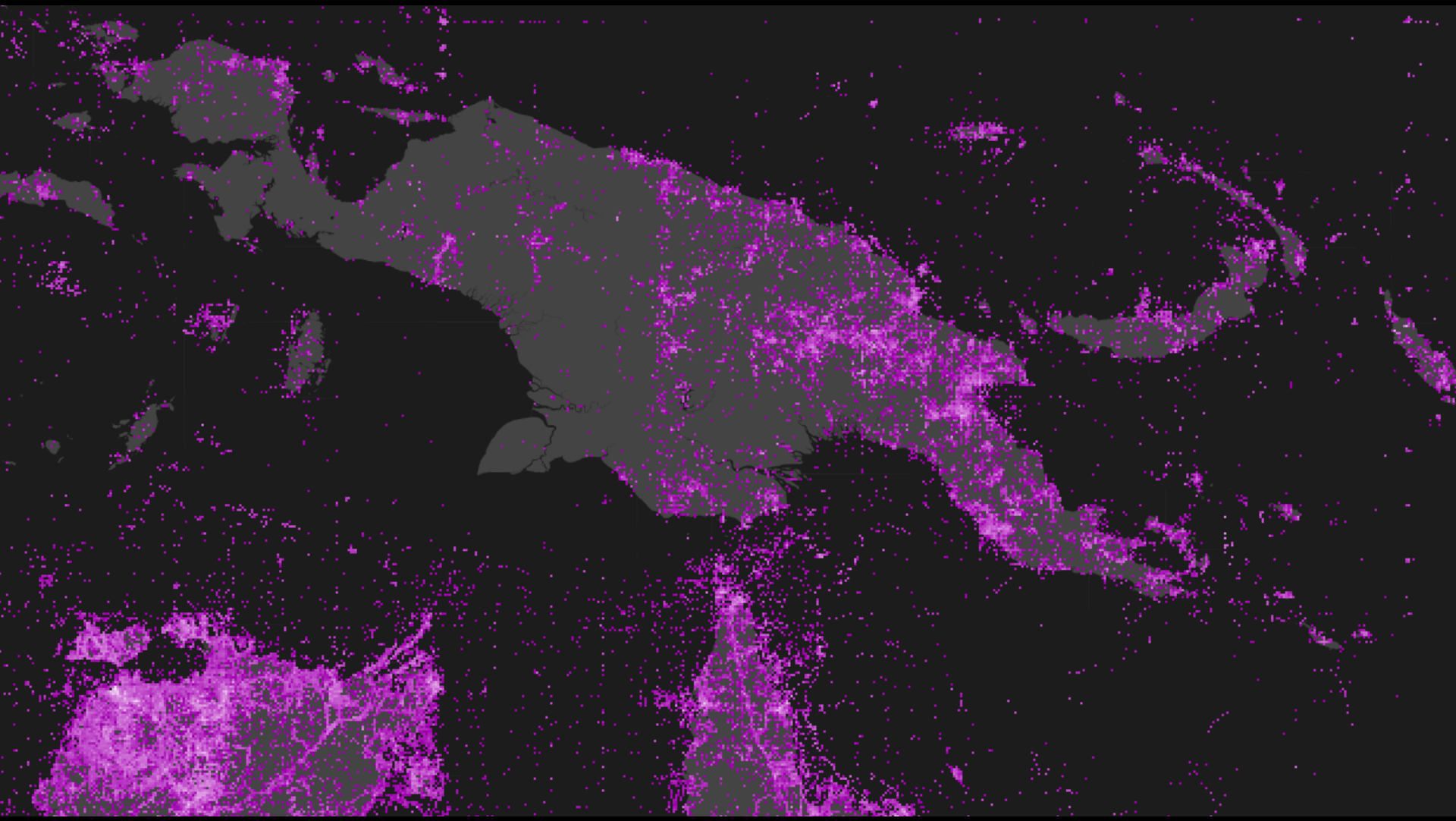
Introduction to Indonesian New Guinea



Current Status of Biodiversity in New Guinea – Species Diversity:

Vertebrata about 3,764 species (2,650 species fishes, 130 species frogs, 15 species turtles, 2 species crocodiles, 141 species lizards, 83 species snakes, 552 species birds and 191 species mammals) and invertebrate around 200,000 species (Allison 2007: 480). Vascular plants between 20,000–25,000 species (Supriatna et al. 1999, Takeuchi 2007).

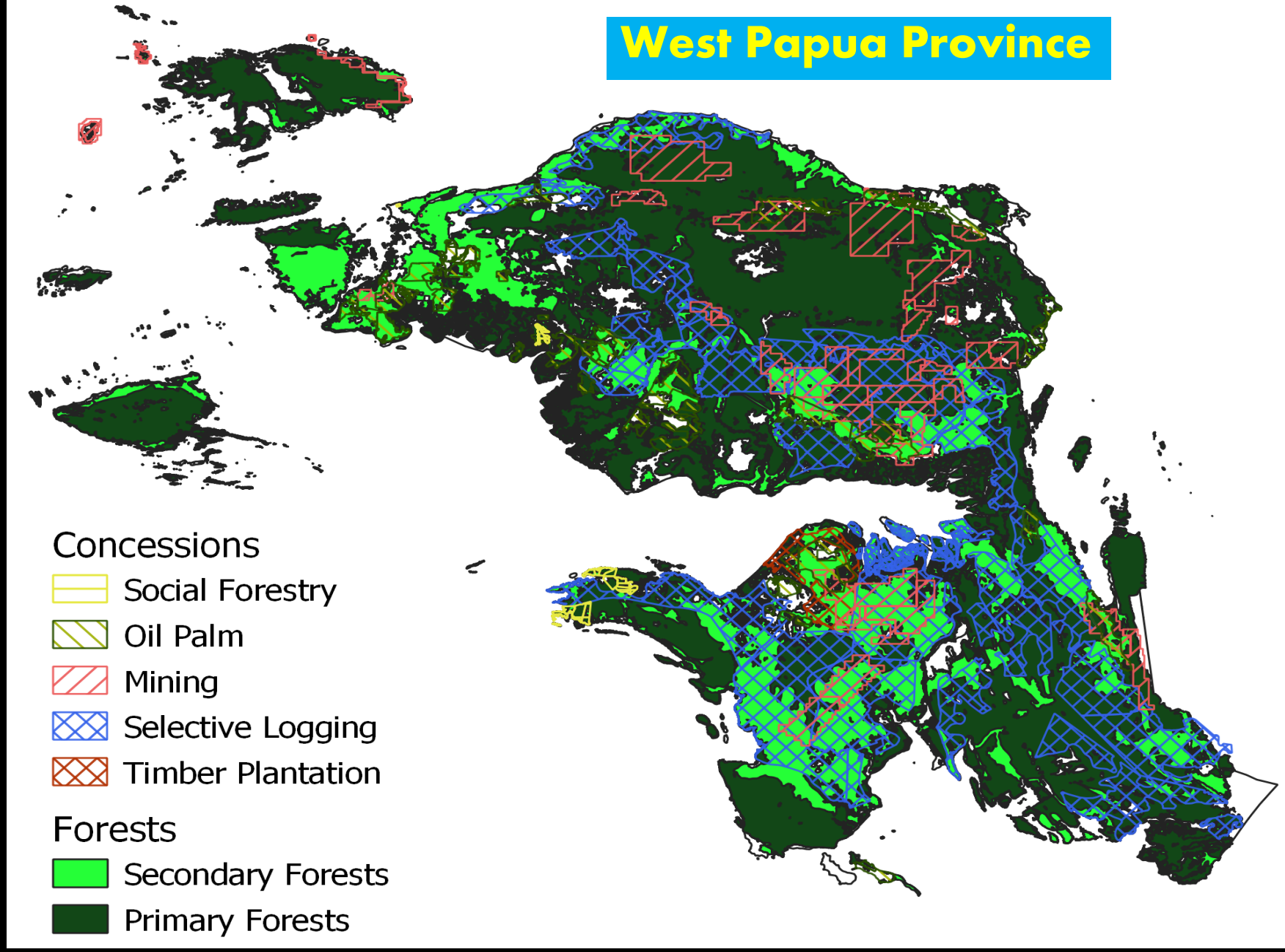
Collection Density (GBIF 2019):



Our knowledge of biodiversity in New Guinea is still incomplete and based on uneven collection activities

Threats to Biodiversity in Indonesian New Guinea:

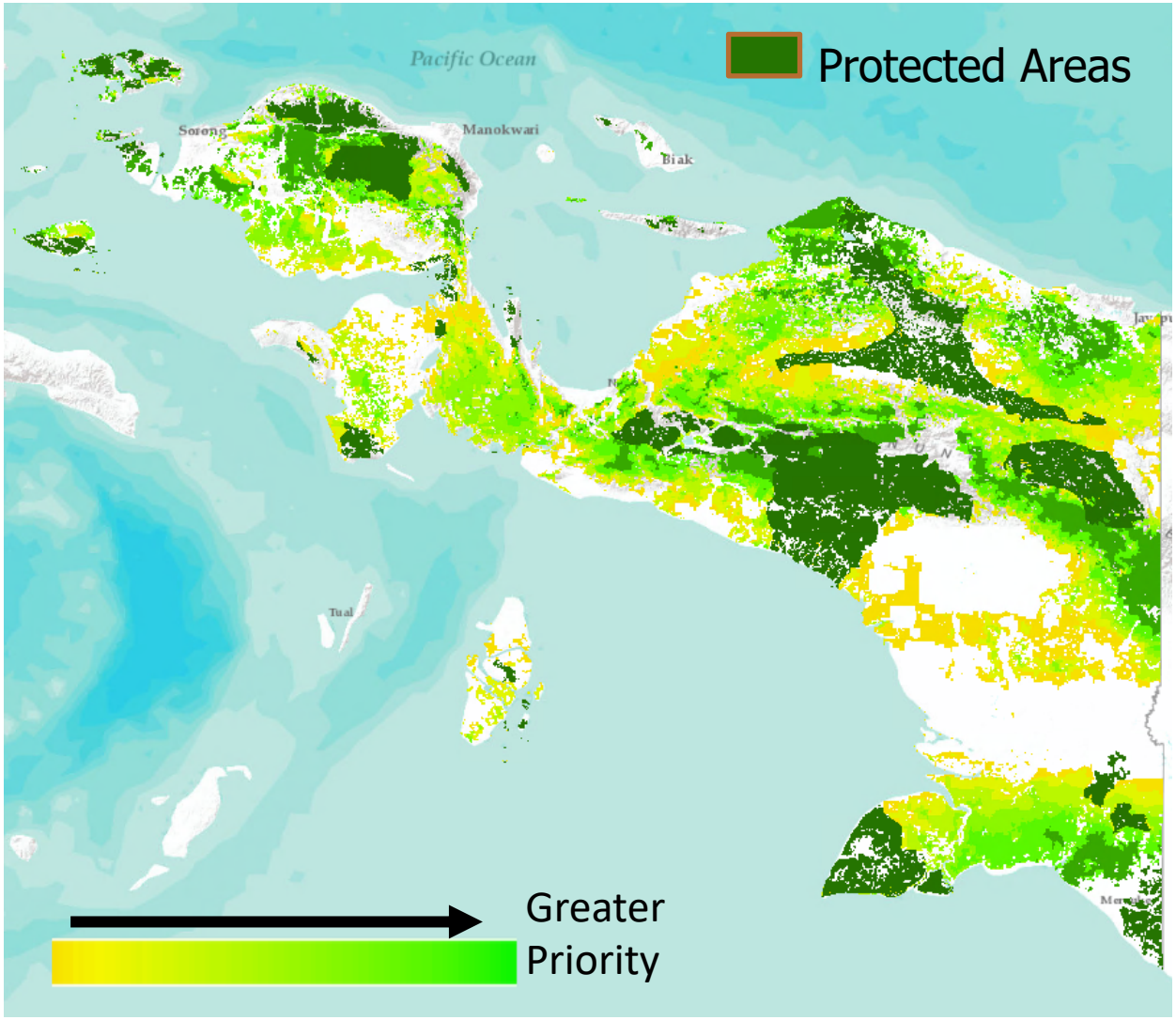
Logging and oil palm concession 2019:

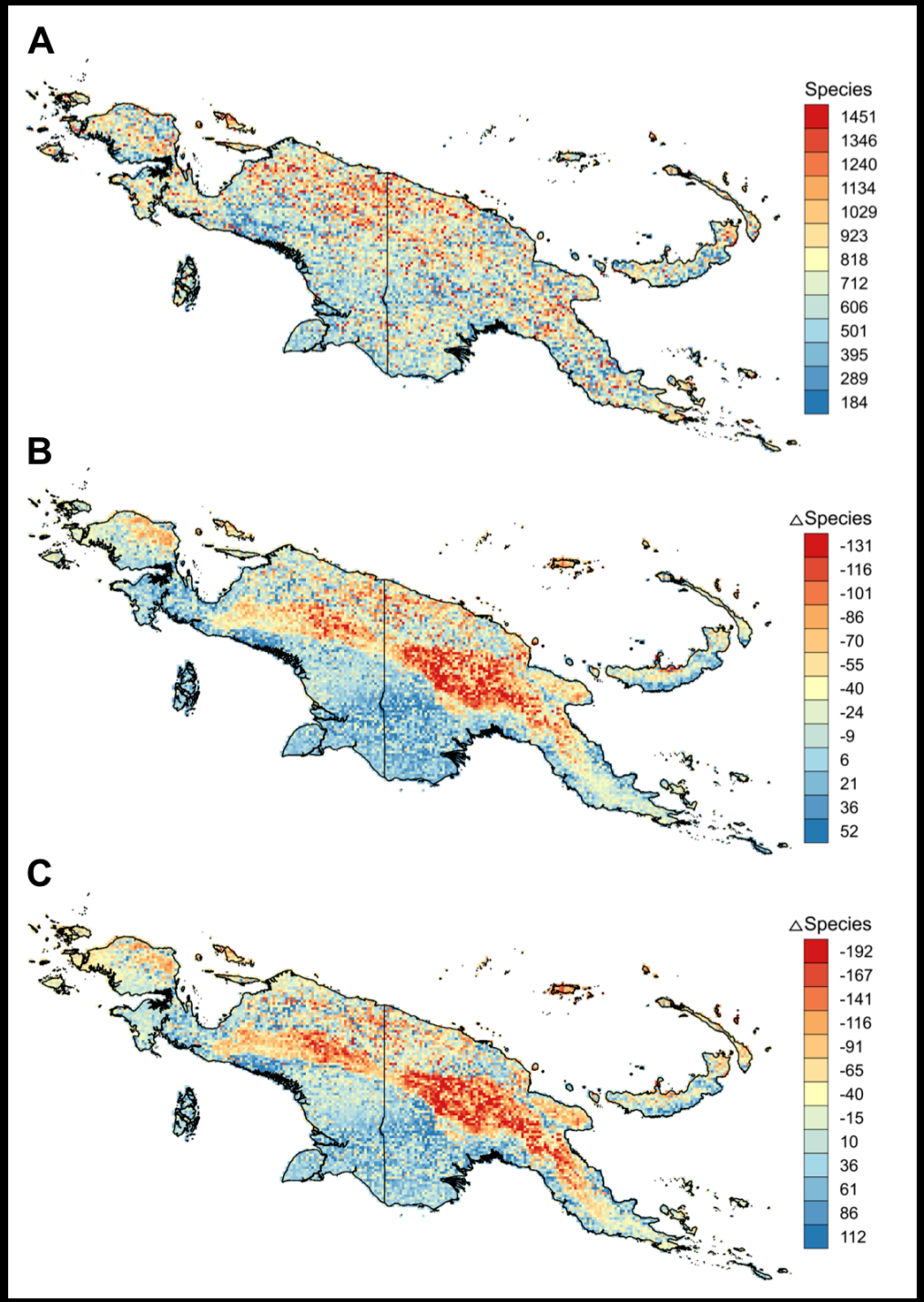


Map Source: WRI Indonesia (2019)

West Papua Conservation Priorities under Climate Change

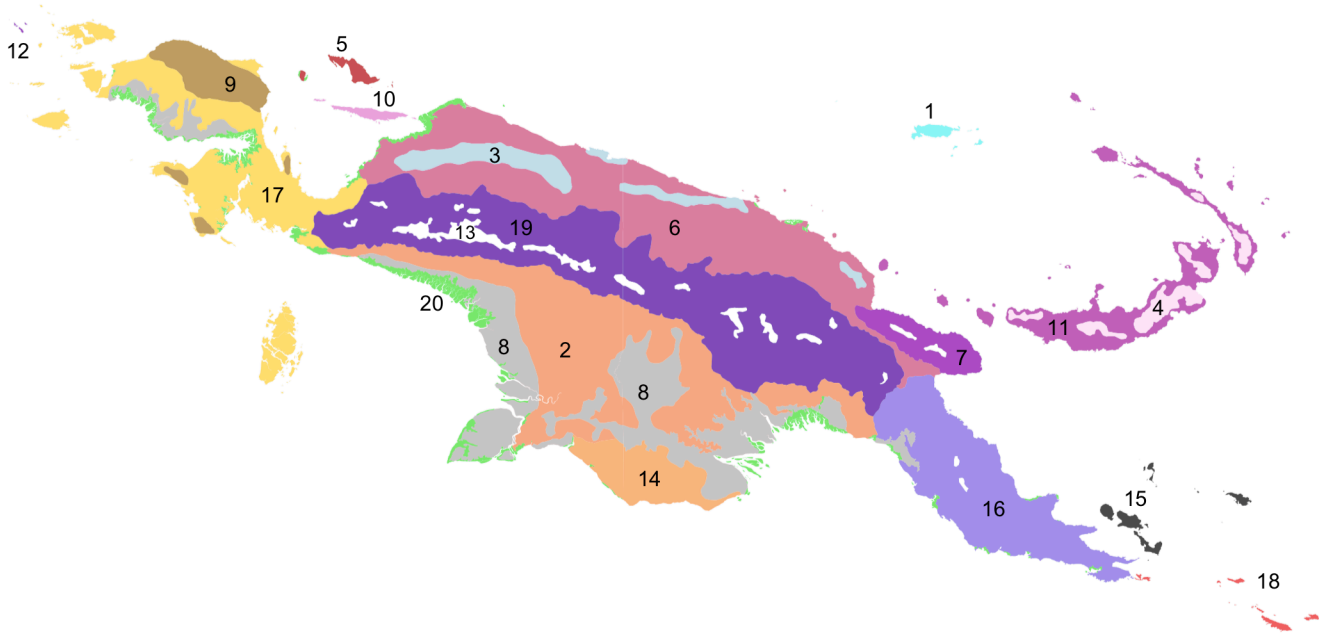
1,500 Endemic Plants (RCP8.5)

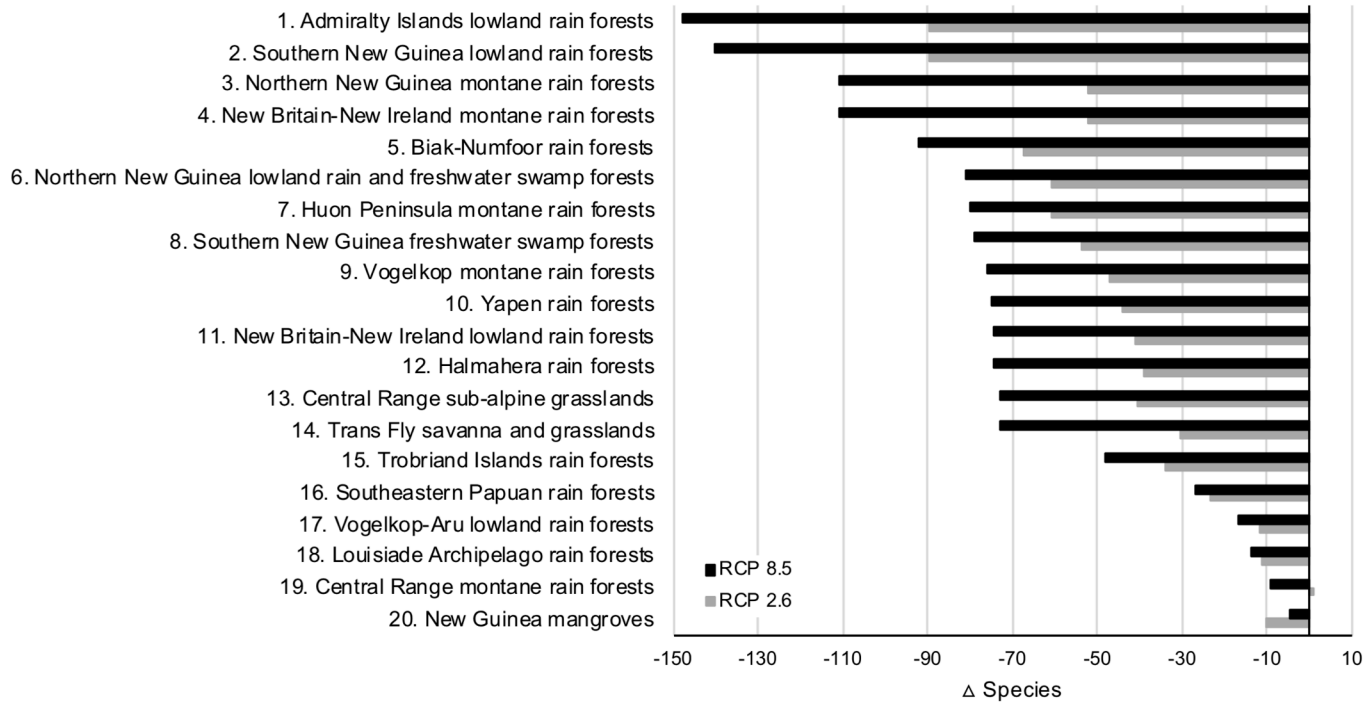




Endemic plant species richness (number of species per grid cell) in the face of climate change. Species richness under current climate (**A**), and difference in species richness between current climate and 2070 RCP 2.6 (**B**) and 2070 RCP 8.5 (**C**).

Camara-Leret *et. al.* (2019).



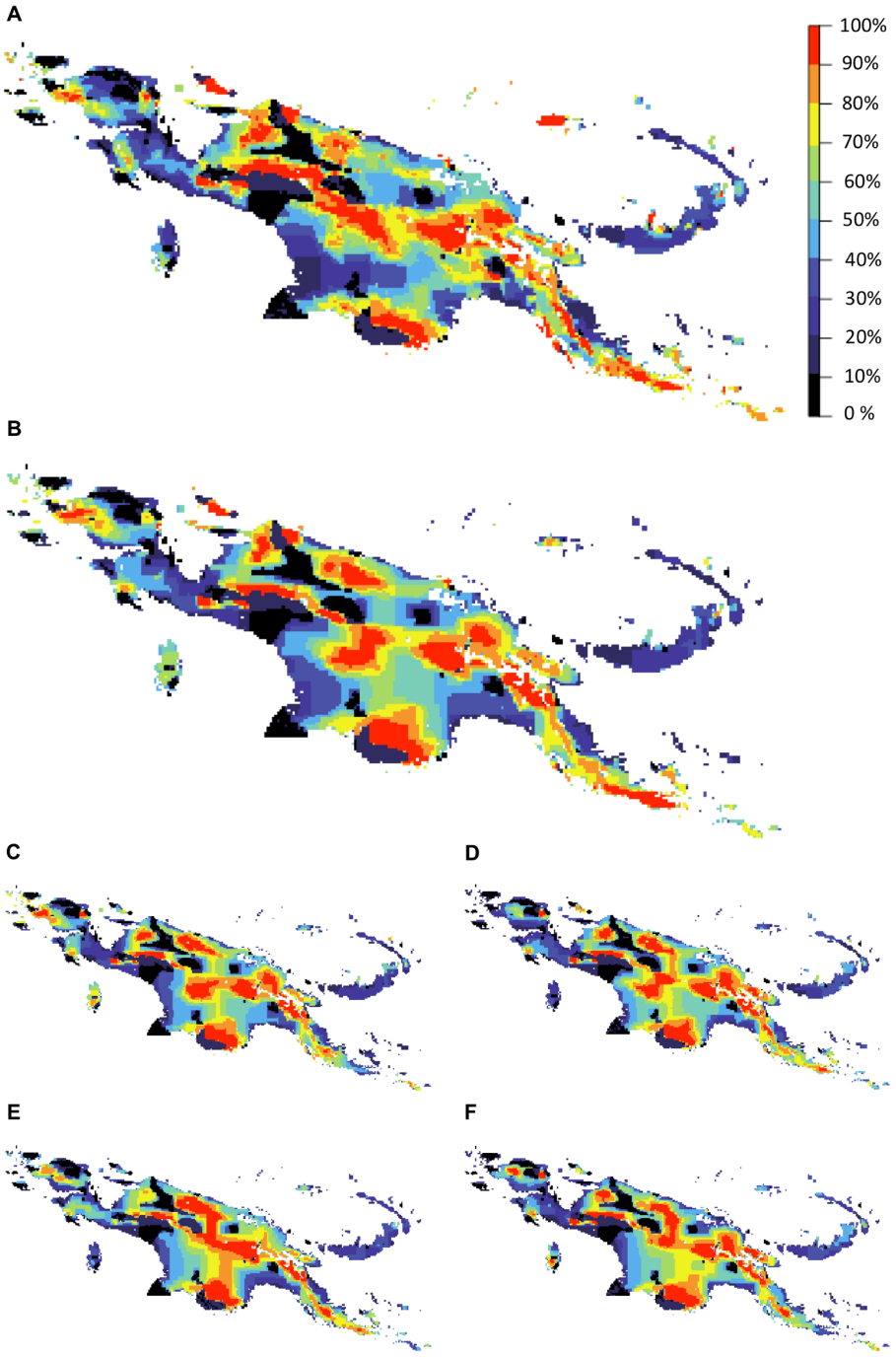


Change in species richness across New Guinea's ecoregions under future climate (2070 RCP 2.6 and RCP 8.5). Change in species richness per ecoregion was calculated using stacked Species Distribution Models (SDMs) of 2353 endemic species.

Camara-Leret *et. al.* (2019).

Change in endemic useful plant richness across New Guinea's language areas by 2070 RCP 8.5. Change in species richness per language area over time was calculated using stacked SDMs of 720 endemic useful species.

Camara-Leret *et. al.* (2019).



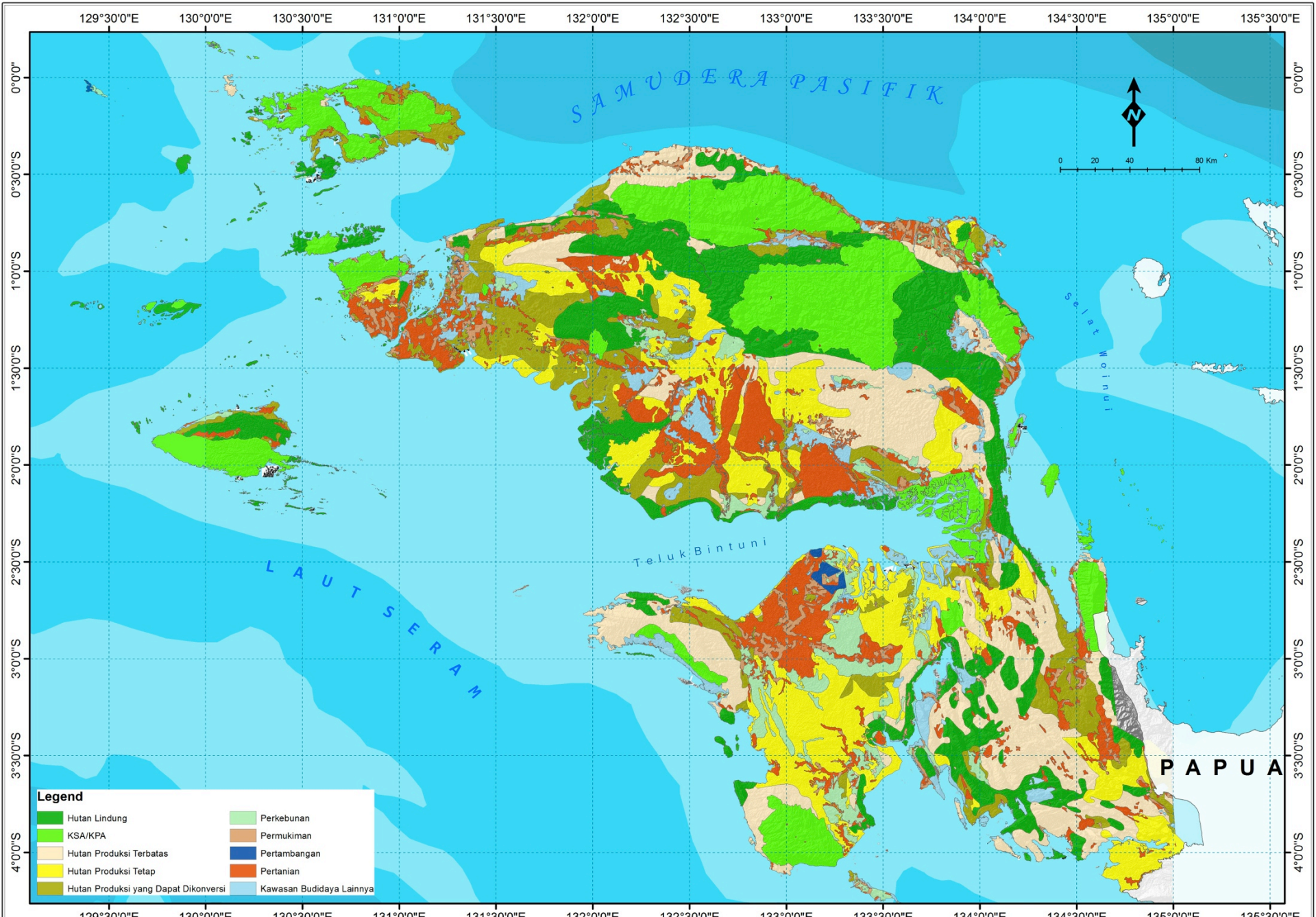
Spatial conservation priorities for endemic plants in the face of climate change. All endemic plants (n = 2353 species) (**A**), all endemic useful plants (n = 720 species) (**B**), and subset of useful plants for construction (n = 374) **C**), culture (n = 271) (**D**), food (n = 162) (**E**) and medicine (n = 187) (**F**).

Camara-Leret *et. al.* (2019).

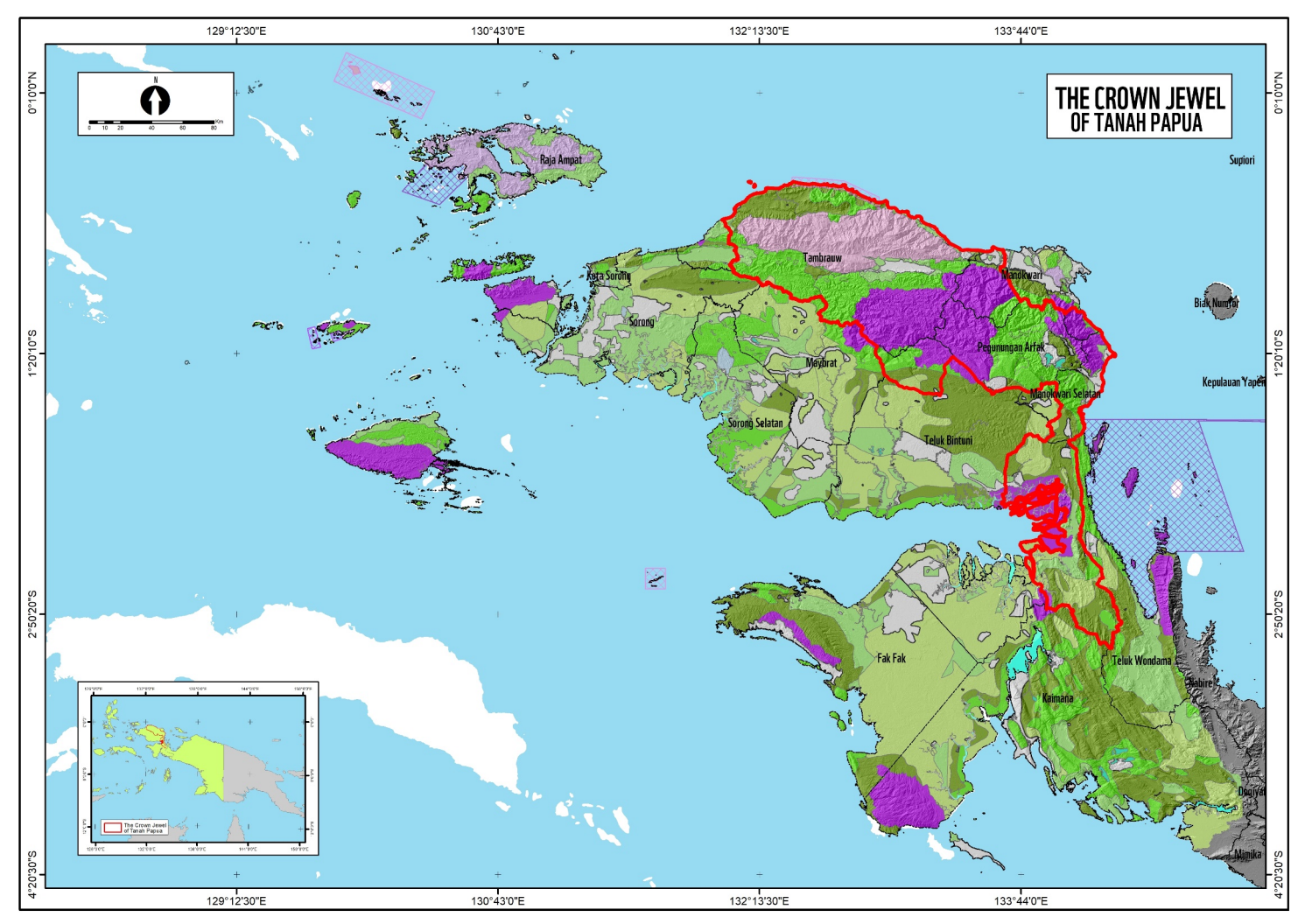
Declaration of West Papua as the first Conservation Province in Indonesia 2015 and followed by Manokwari Declaration 2018.

A commitment of all stakeholders to protect and preserve minimum 70% of forest covers and 50% sea and coastal area in West Papua – increase the protected areas.

Spatial Planning Map of West Papua Province



THE CROWN JEWEL OF TANAH PAPUA



A brand new Protected Area with total 2,314,804.28 hectares


“Thank you”