



## Asia Regional Engagement: Data Use in Asia

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**GBIF**

Global Biodiversity  
Information Facility

# ASIAN BIODIVERSITY IN CONTEXT

- Asia region is the most populous region in the world
  - >4 billion people (60% of the world's people)
  - 52 per cent (400 million) of the 767 million global poor,
  - as much as 75 per cent of the global population of 370 million indigenous people
  - Sustaining the viability of and access to ecosystem services will contribute to poverty alleviation
- Rich biodiversity and valuable ecosystem services
  - 14 of 36 global hotspots
  - 7 of the 17 megadiverse countries
  - Greatest marine diversity globally
- The region has experienced rapid economic growth
  - 7.6 per cent as compared to the 3.4 per cent global average (from 1990 to 2010)
  - The expansion of agricultural land has also been among the world's highest
  - One of the fastest urbanization rates in the world (2-3 % per year)



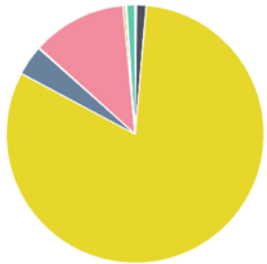
# STATE OF ASIAN BIODIVERSITY

- Biodiversity trends are generally negative
  - Populations of large wild mammals and birds have declined
  - Invasive alien species have increased in number and abundance
  - Protected area coverage does not fully reflect biodiversity
  - Traditional agrobiodiversity in decline
  - Fisheries unsustainable
  - Climate change impacting species
  - Increase in waste and pollution
- However, ecosystem conditions vary across the region
- More data needed Western Asia, Hindu-Kush Himalayas and invasive, data-deficient species and endemic species and genetic



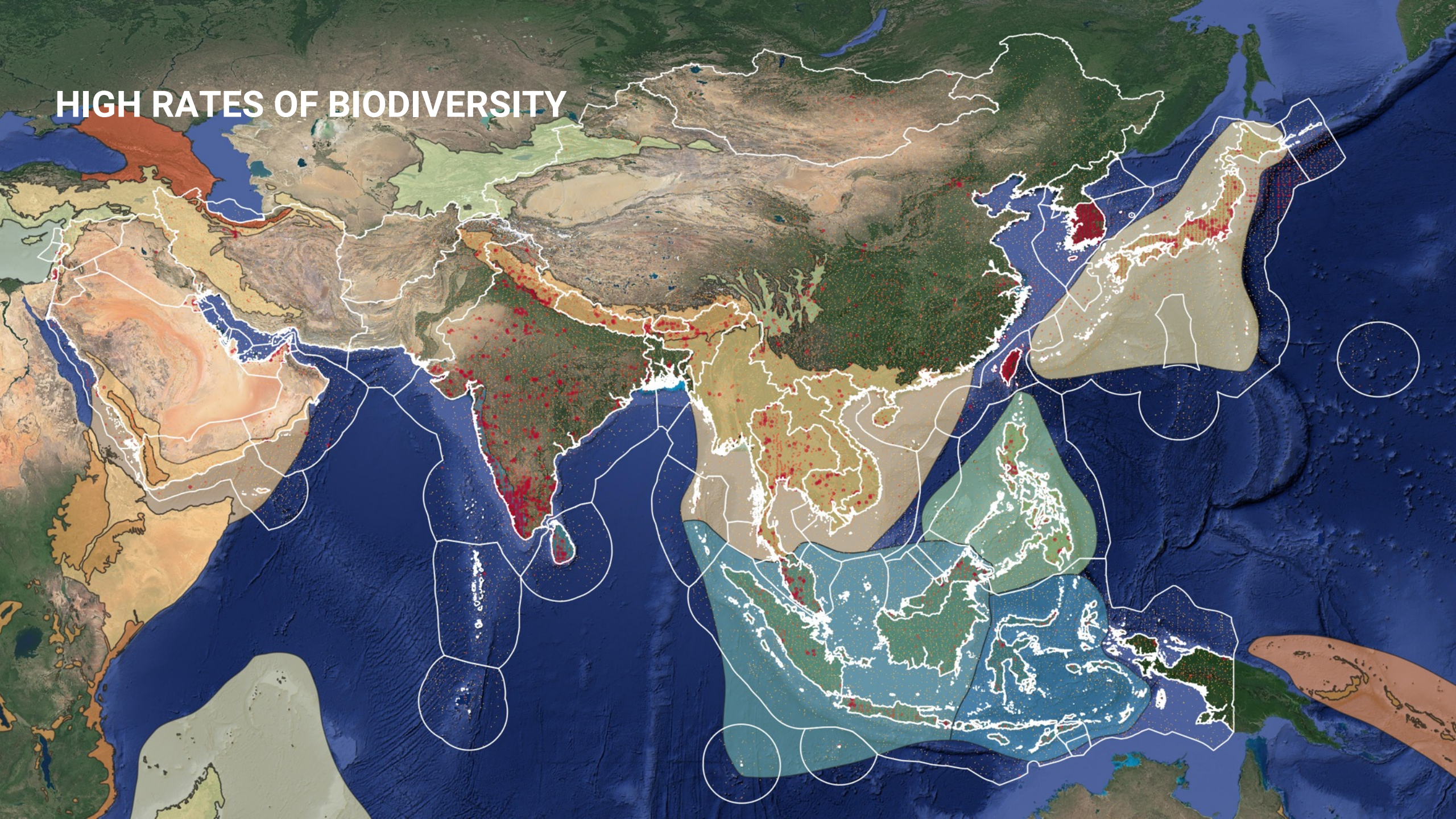
# BIODIVERSITY DATA DENSITY IN ASIA

8,844,847  
occurrence  
records  
1.4% human  
observation



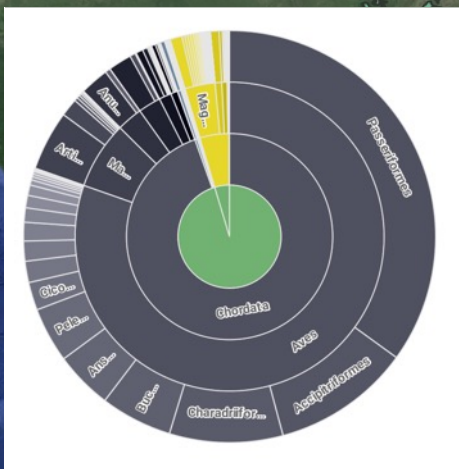
- Observation
- Material citation
- Occurrence
- Machine observation
- Preserved specimen
- Human observation
- Fossil specimen
- Material sample
- Living specimen

# HIGH RATES OF BIODIVERSITY



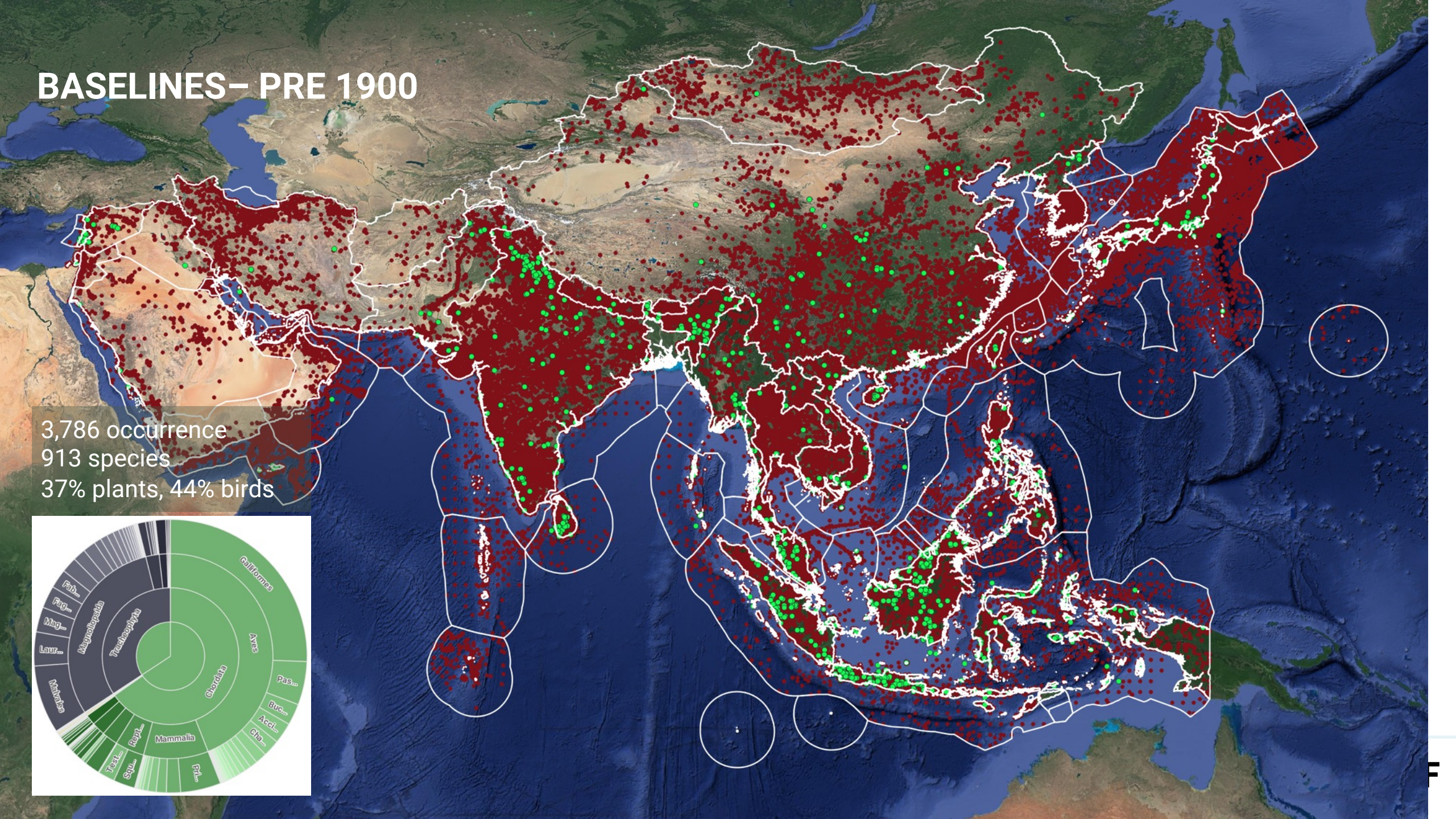
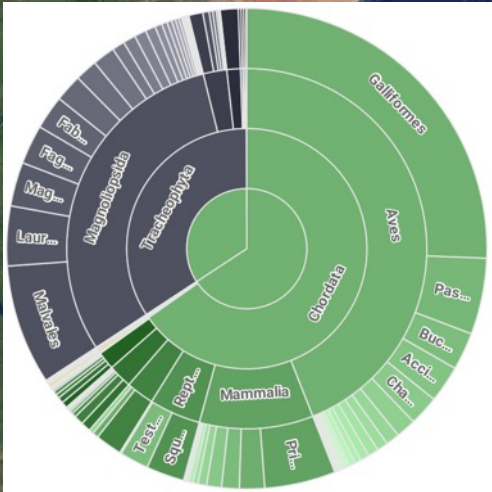
# THREATENED SPECIES IN ASIA

1,513,120 Occurrence records  
8128 species  
95% Animals, 80% birds



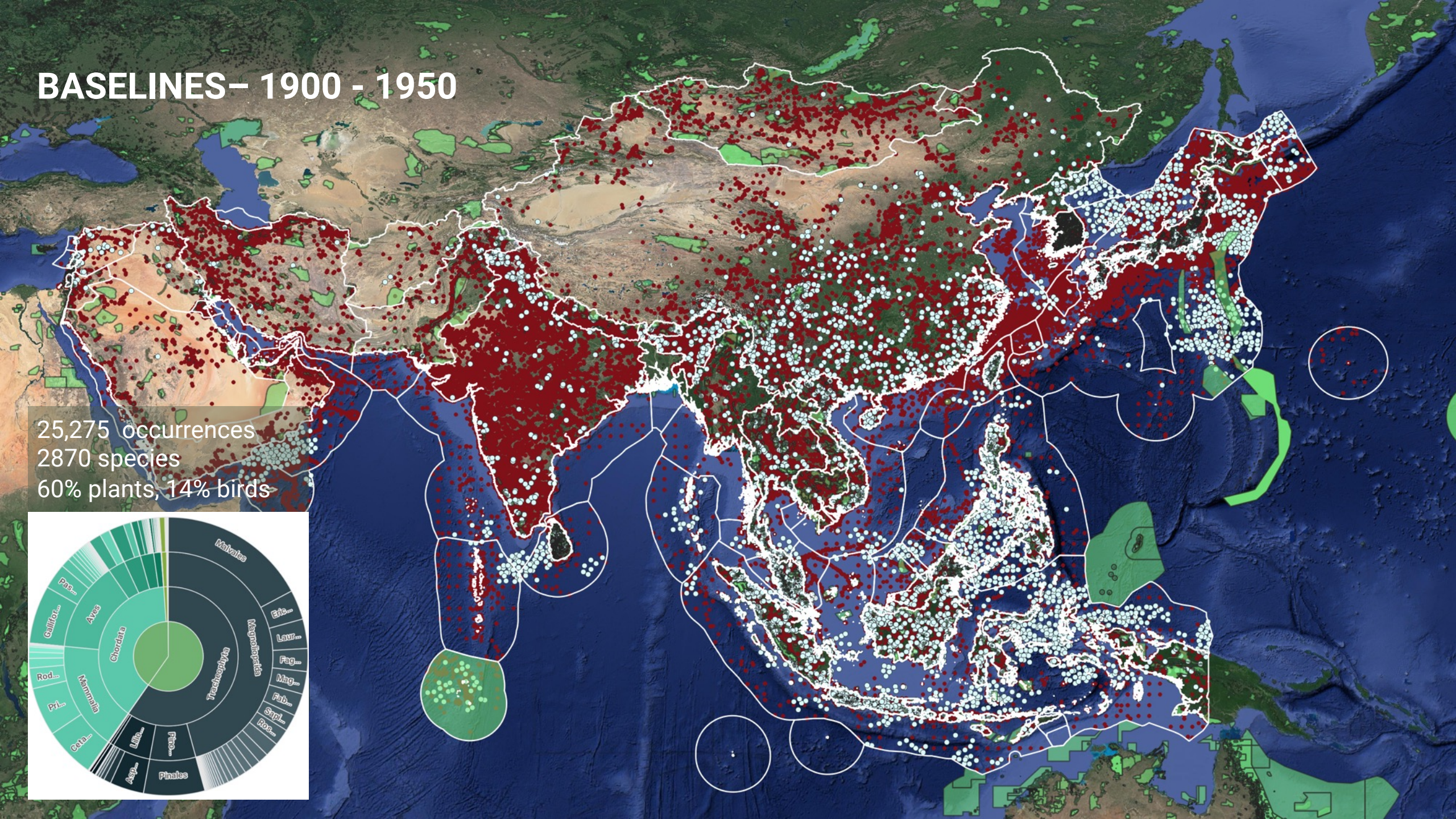
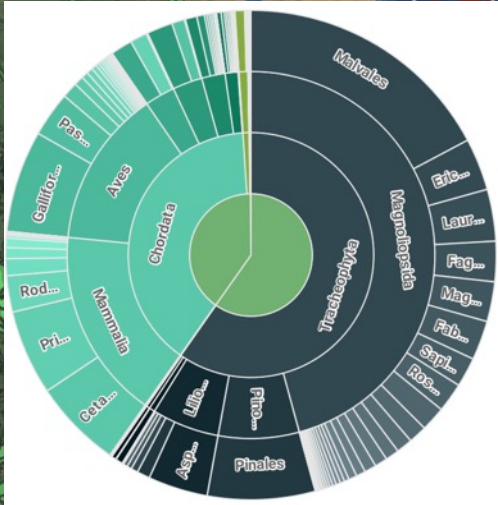
# BASELINES— PRE 1900

3,786 occurrence  
913 species  
37% plants, 44% birds



# BASELINES— 1900 - 1950

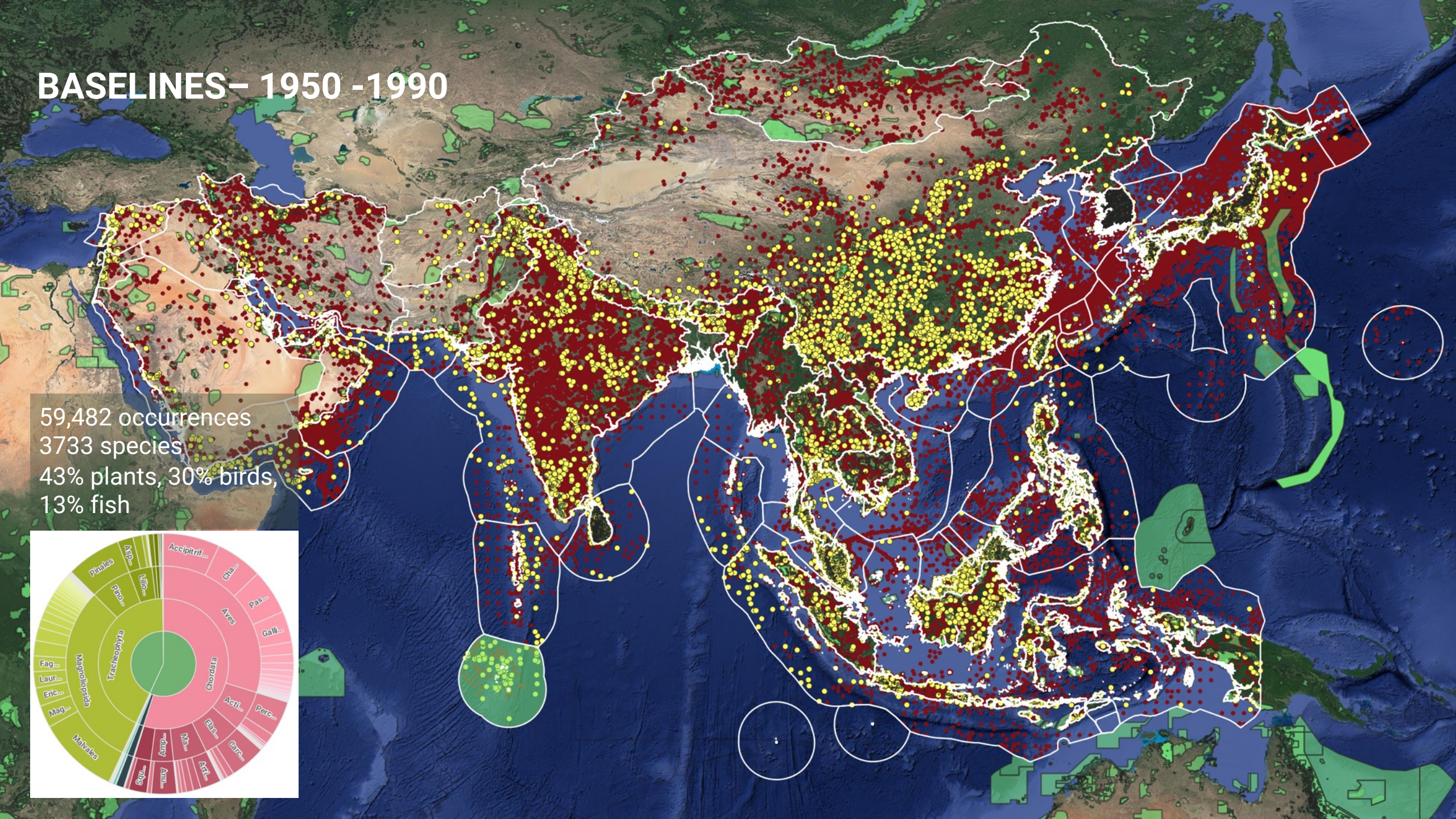
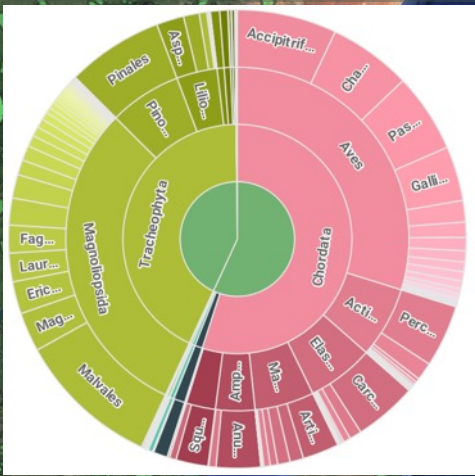
25,275 occurrences  
2870 species  
60% plants, 14% birds



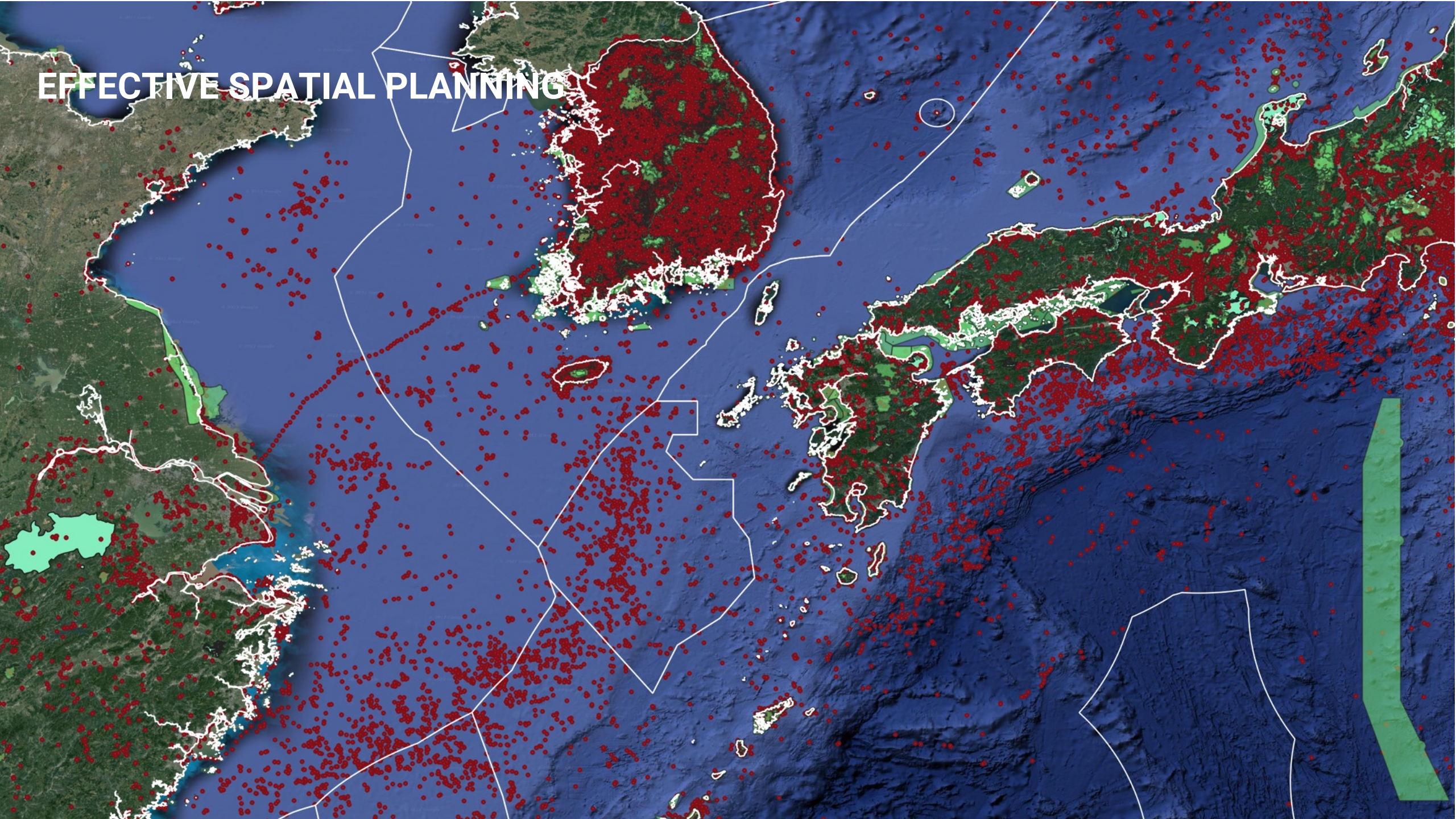


# BASELINES— 1950 -1990

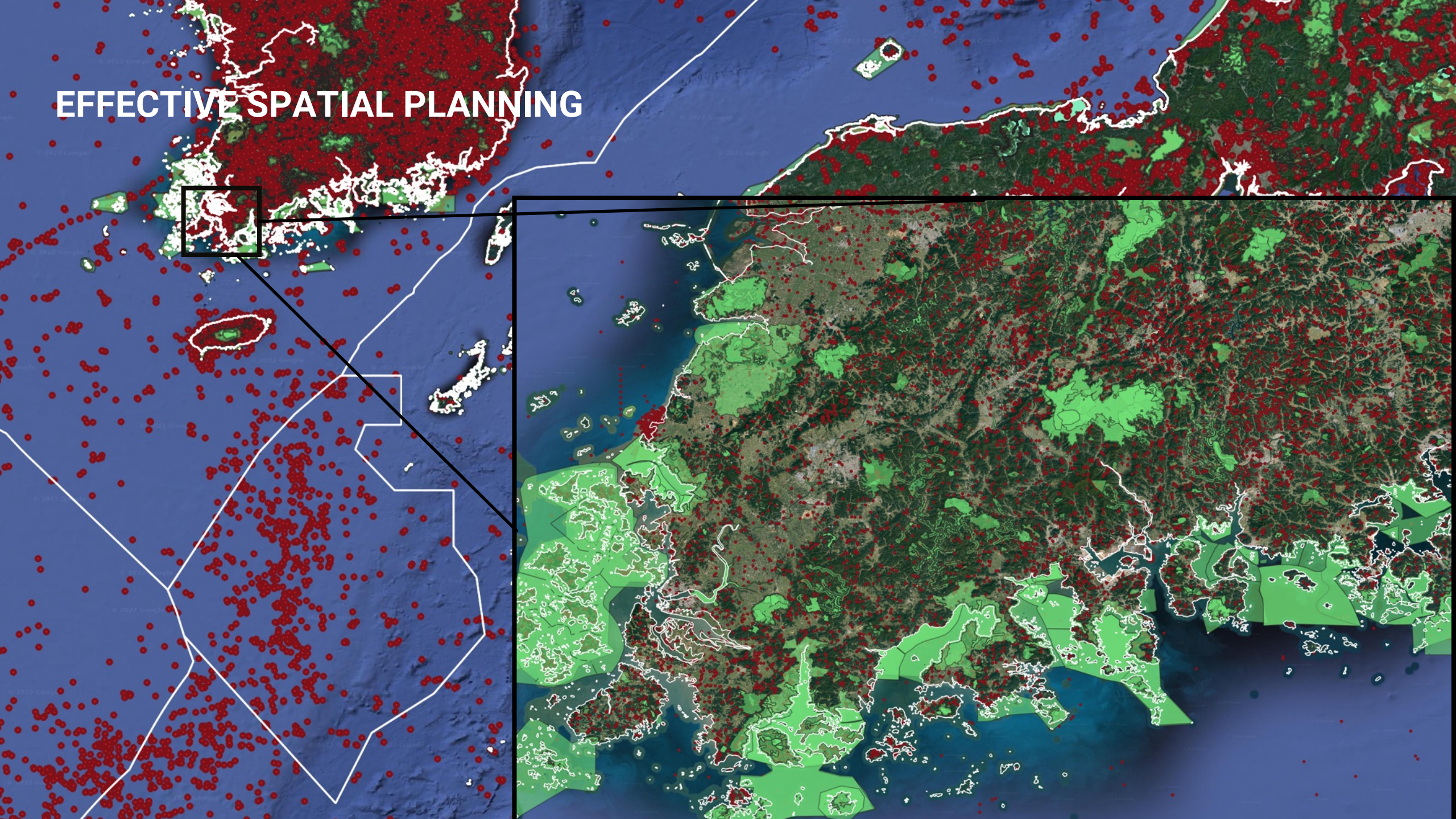
59,482 occurrences  
3733 species  
43% plants, 30% birds,  
13% fish



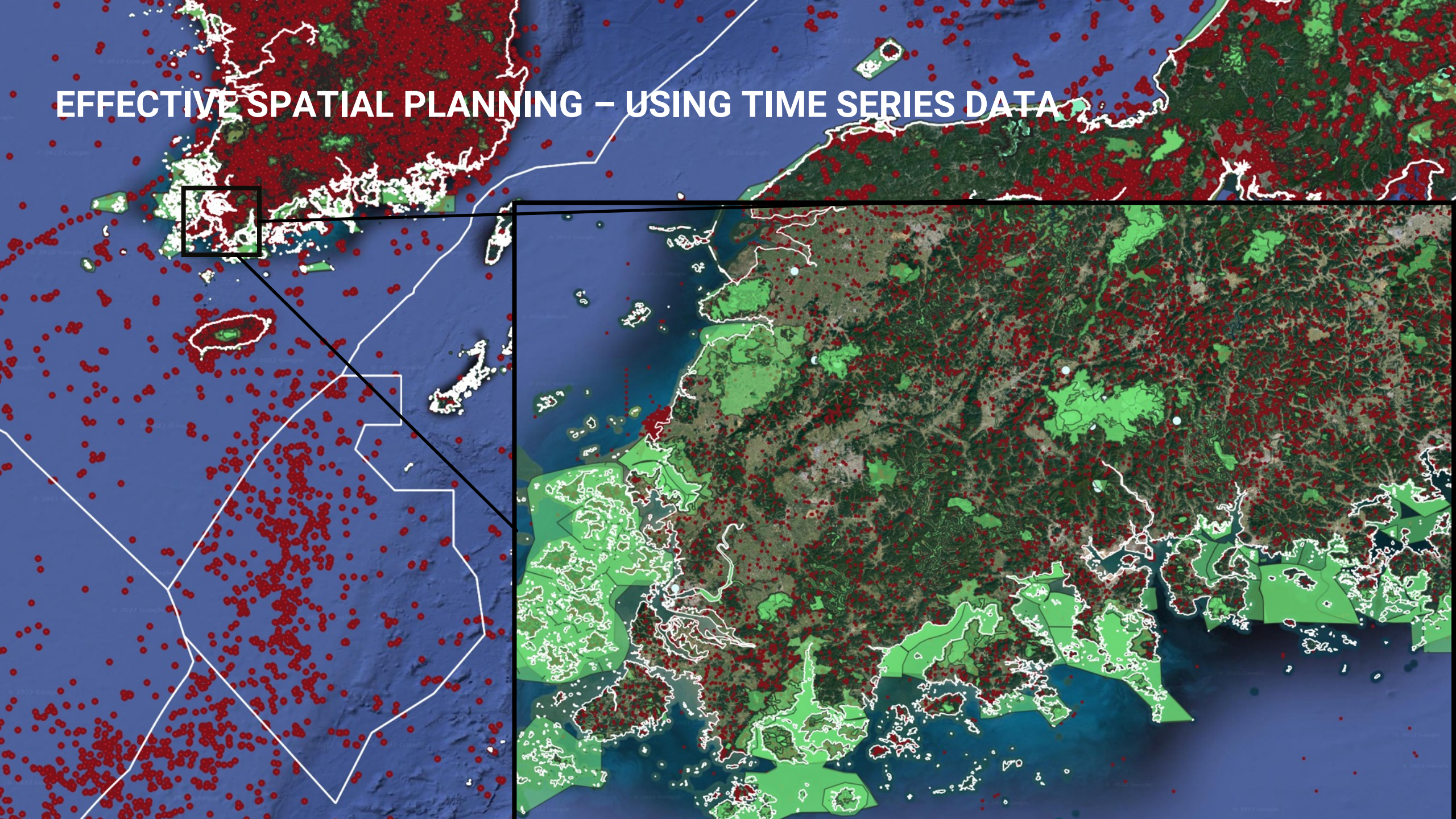
# EFFECTIVE SPATIAL PLANNING



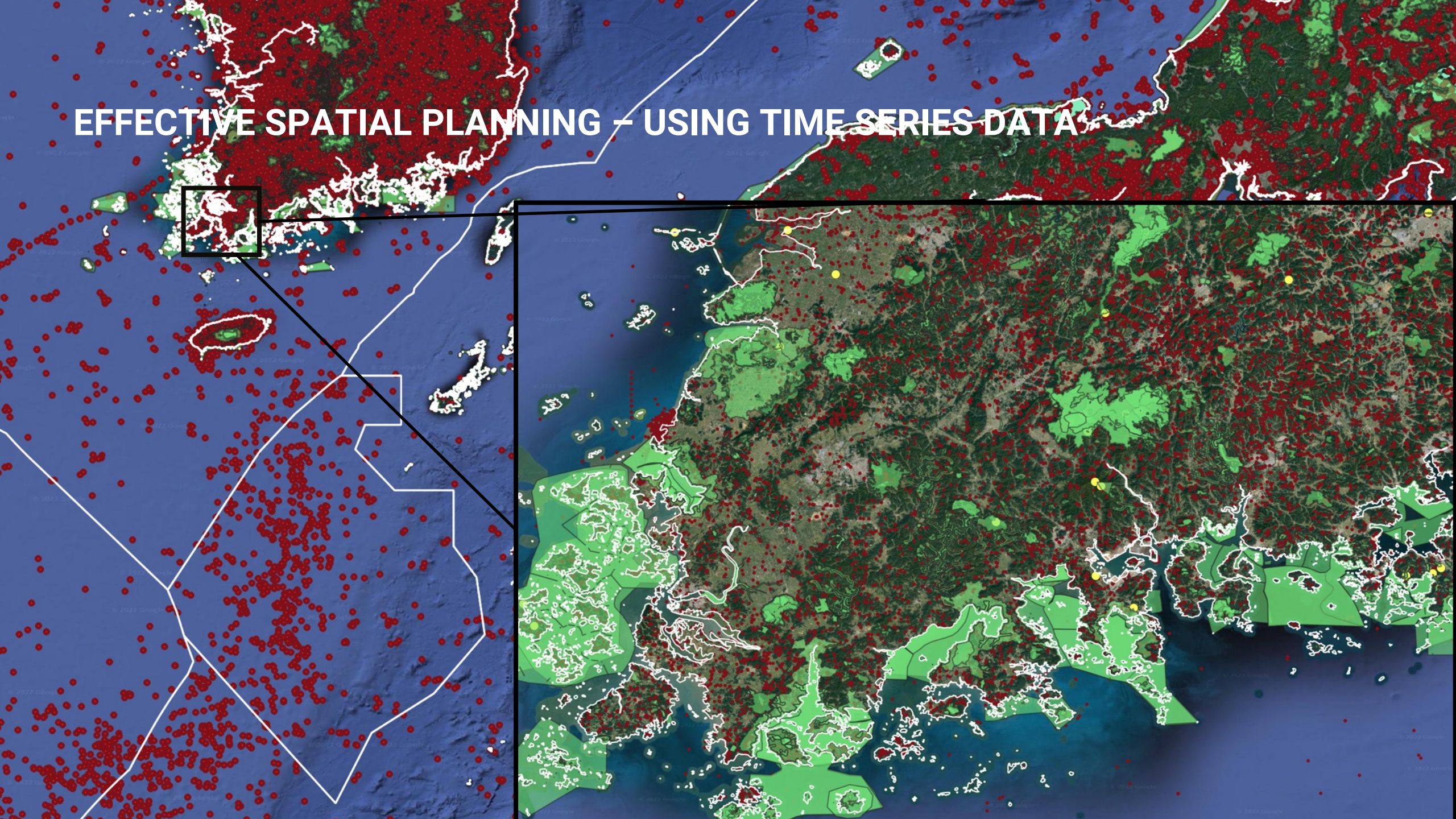
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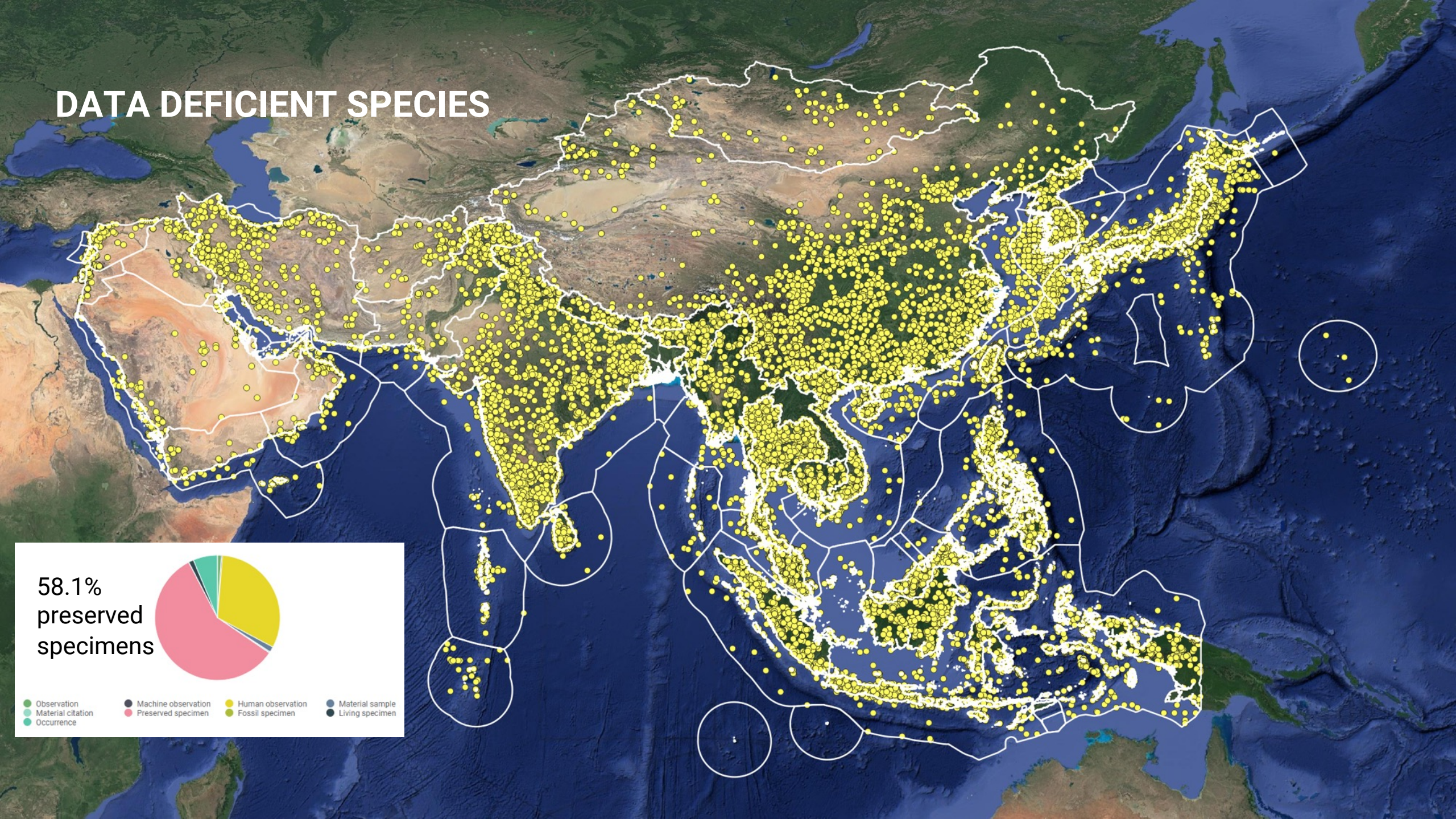
# EFFECTIVE SPATIAL PLANNING – USING TIME SERIES DATA



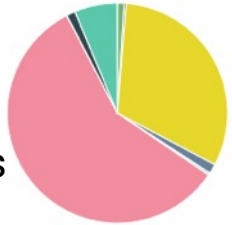
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# DATA DEFICIENT SPECIES

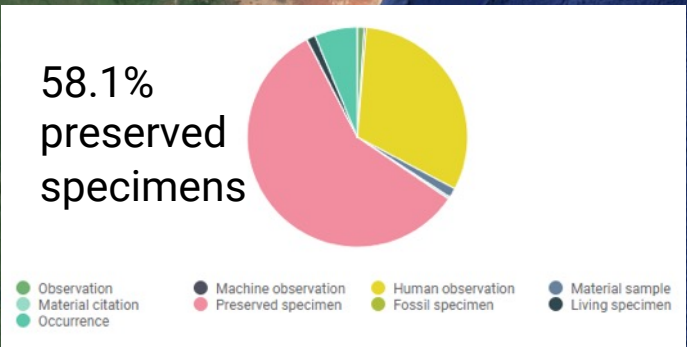
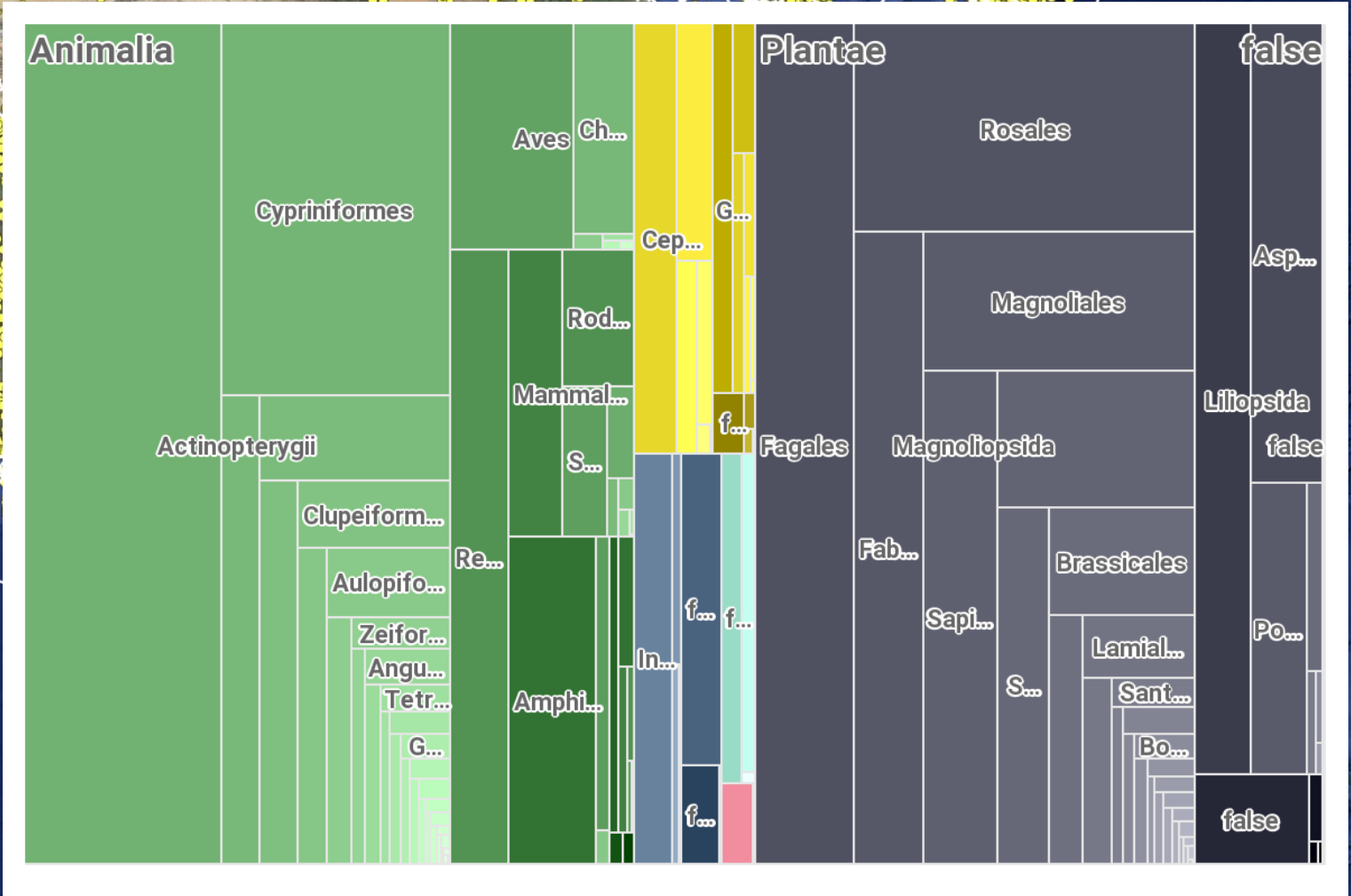
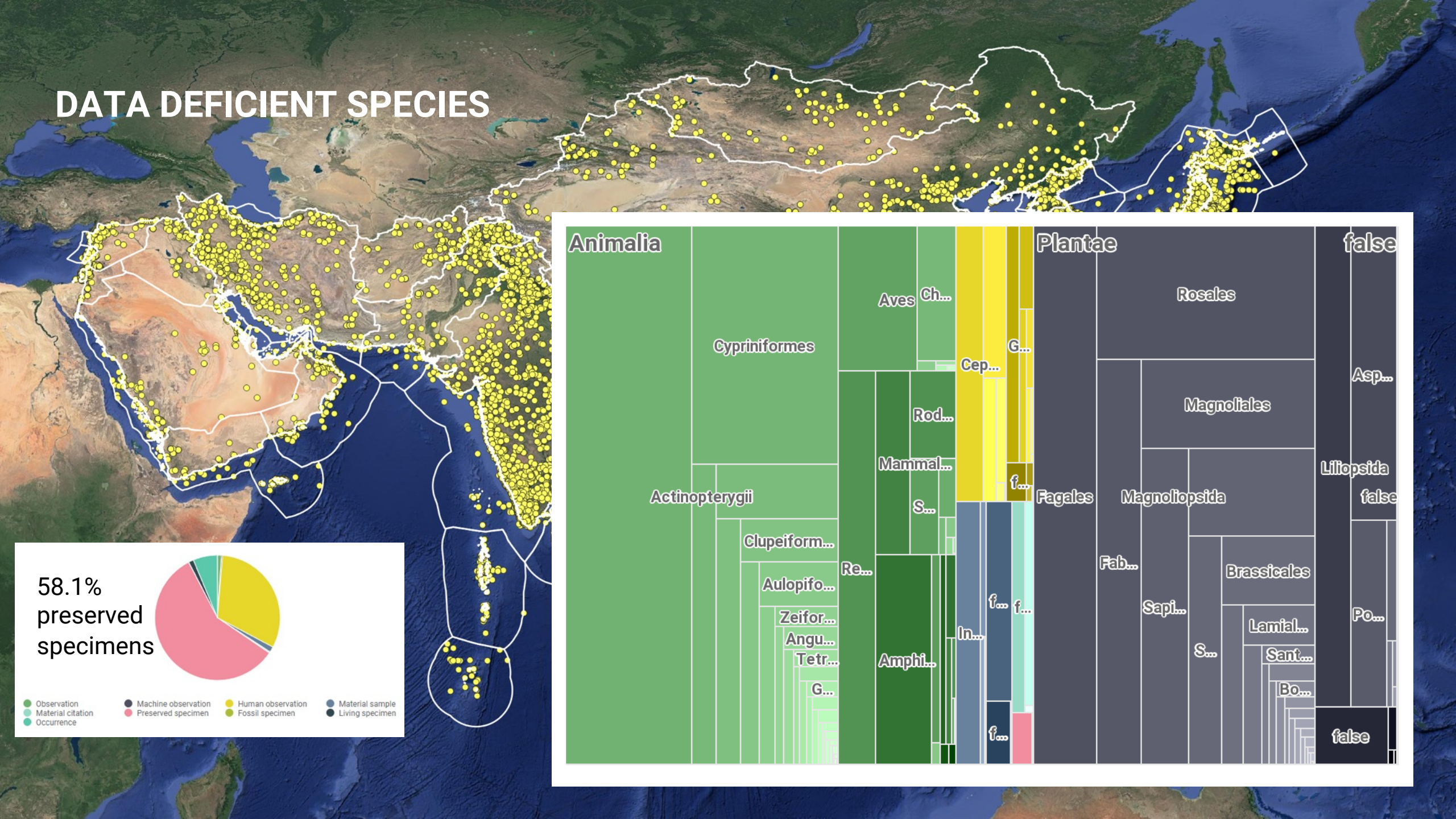


58.1%  
preserved  
specimens

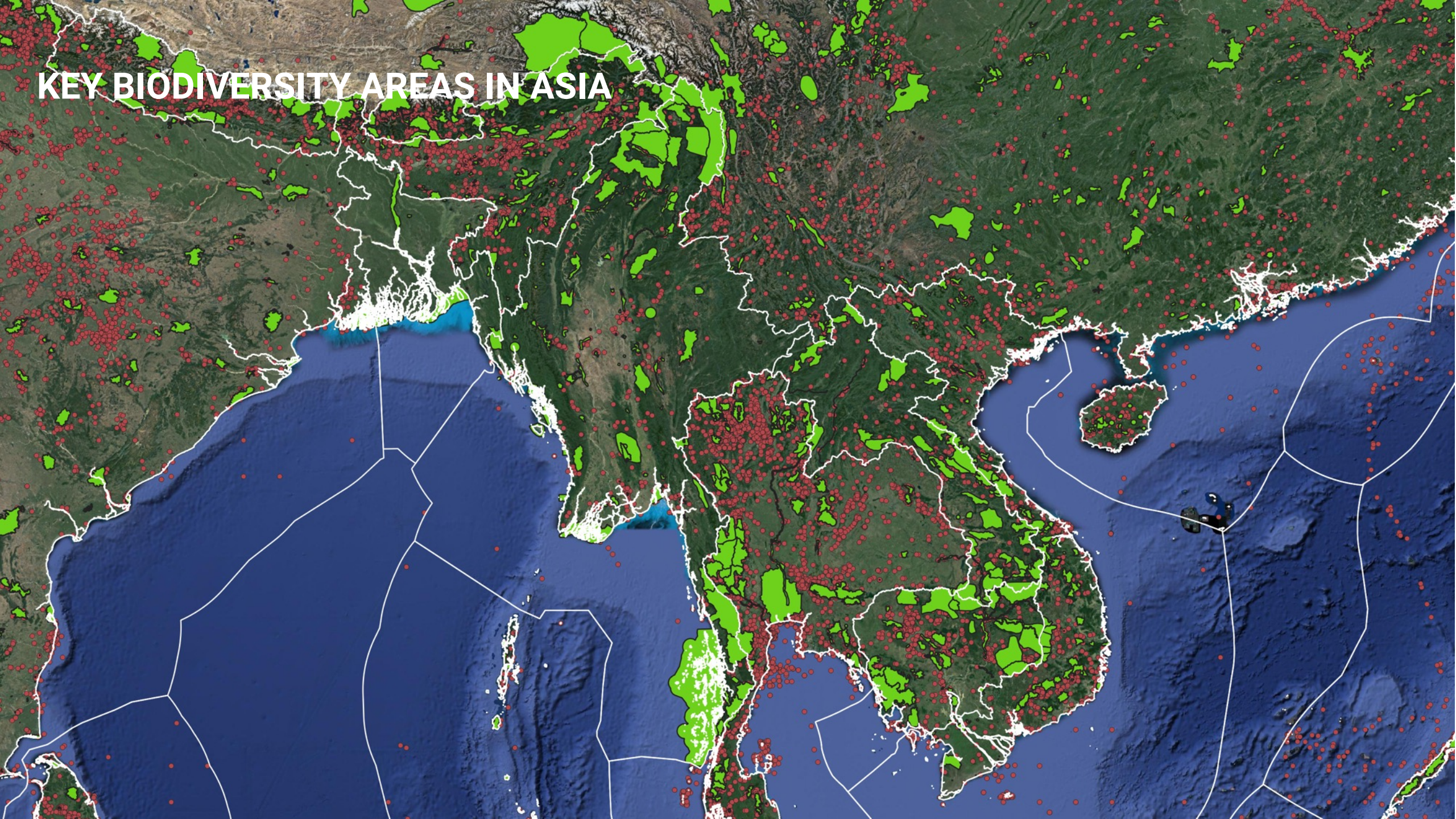


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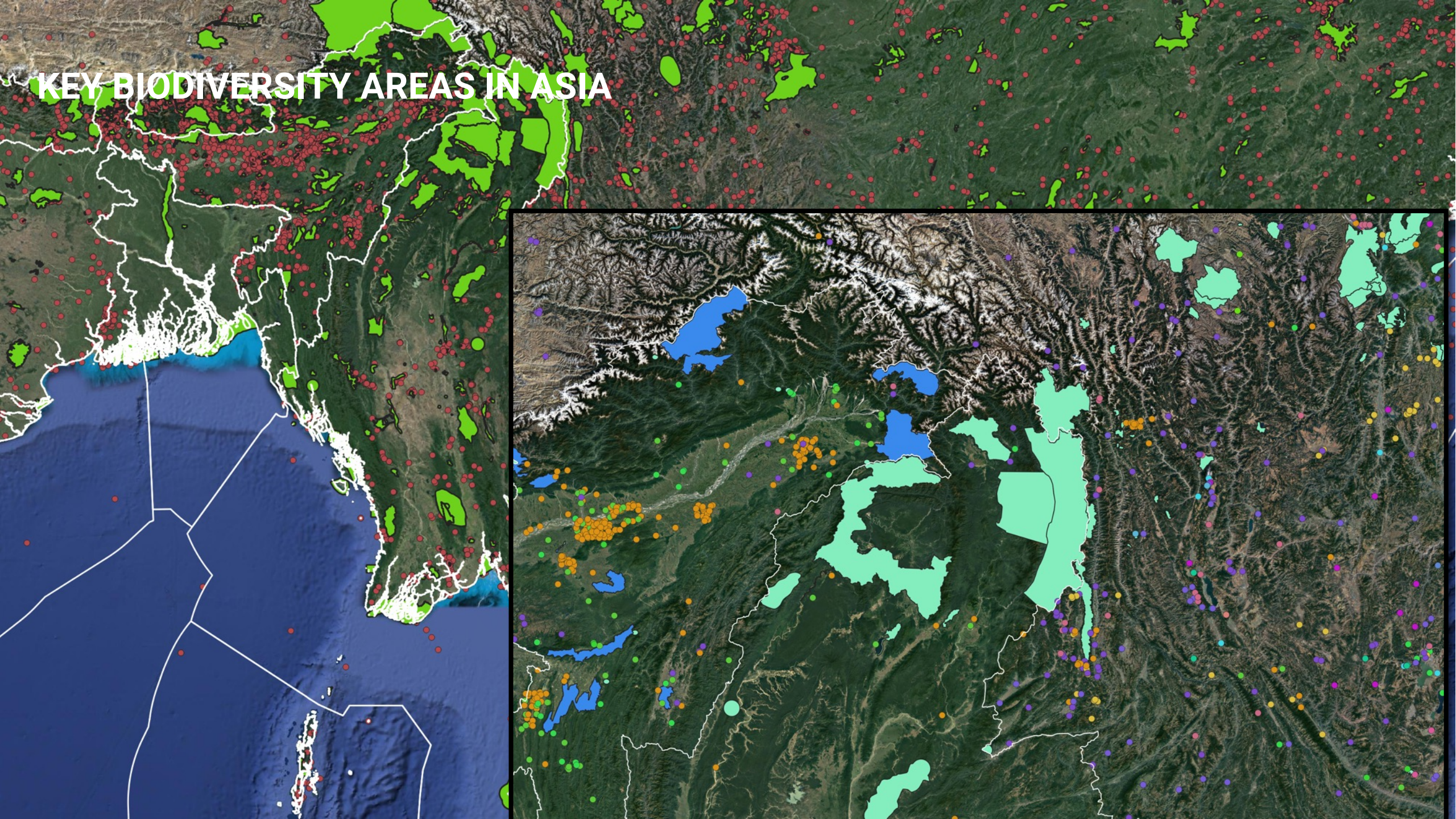


# KEY BIODIVERSITY AREAS IN ASIA

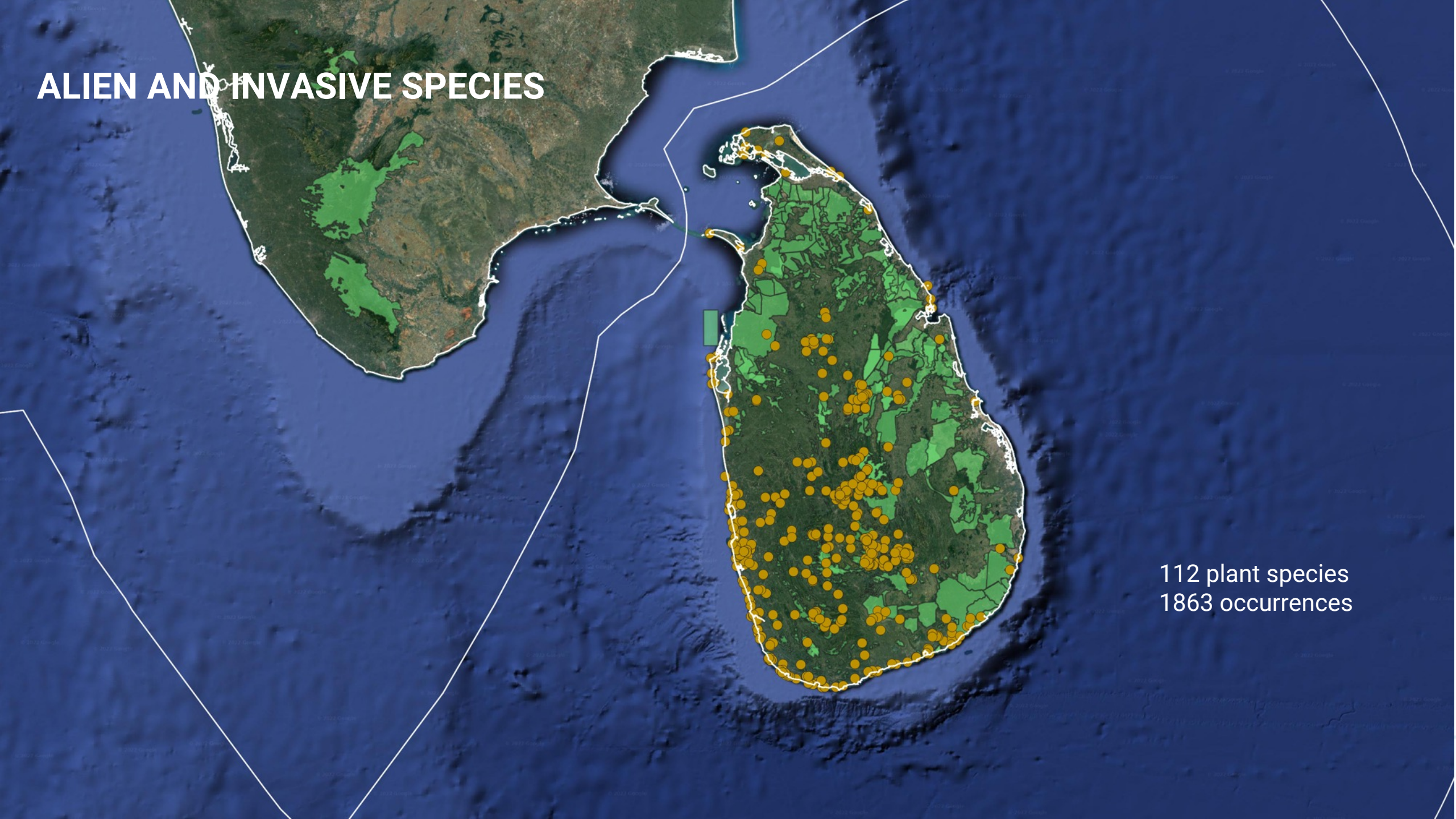




# KEY BIODIVERSITY AREAS IN ASIA



# ALIEN AND INVASIVE SPECIES



112 plant species  
1863 occurrences

# INTEGRATING DATA INTO DECISION MAKING

## UNLOCKING RELEVANT DATA

Digitizing and databasing Sumatran flora - Try Surya Harapan - Herbarium Universitas Andalas (ANDA)

Digitizing reptile and amphibian specimens and the Bombay Natural History Society - Rahul V Khot - Bombay Natural History Society

DAYO: Invasive Alien Amphibians in the Philippines - Arman Pili - Monash University

*10.30 - 10.45 - Tea & Coffee break*

## SYSTEMS FOR EFFECTIVE DECISION MAKING

Taiwan Ecological Network - Chih-Chin Shih - Taiwan Forestry Bureau

Mountain Environment Regional Information System - Birendra Bajracharya - ICIMOD

**Panel** - How can GBIF strengthen the links between open data and decision making in Asia?