







# ECOSYSTEM RESTORATION

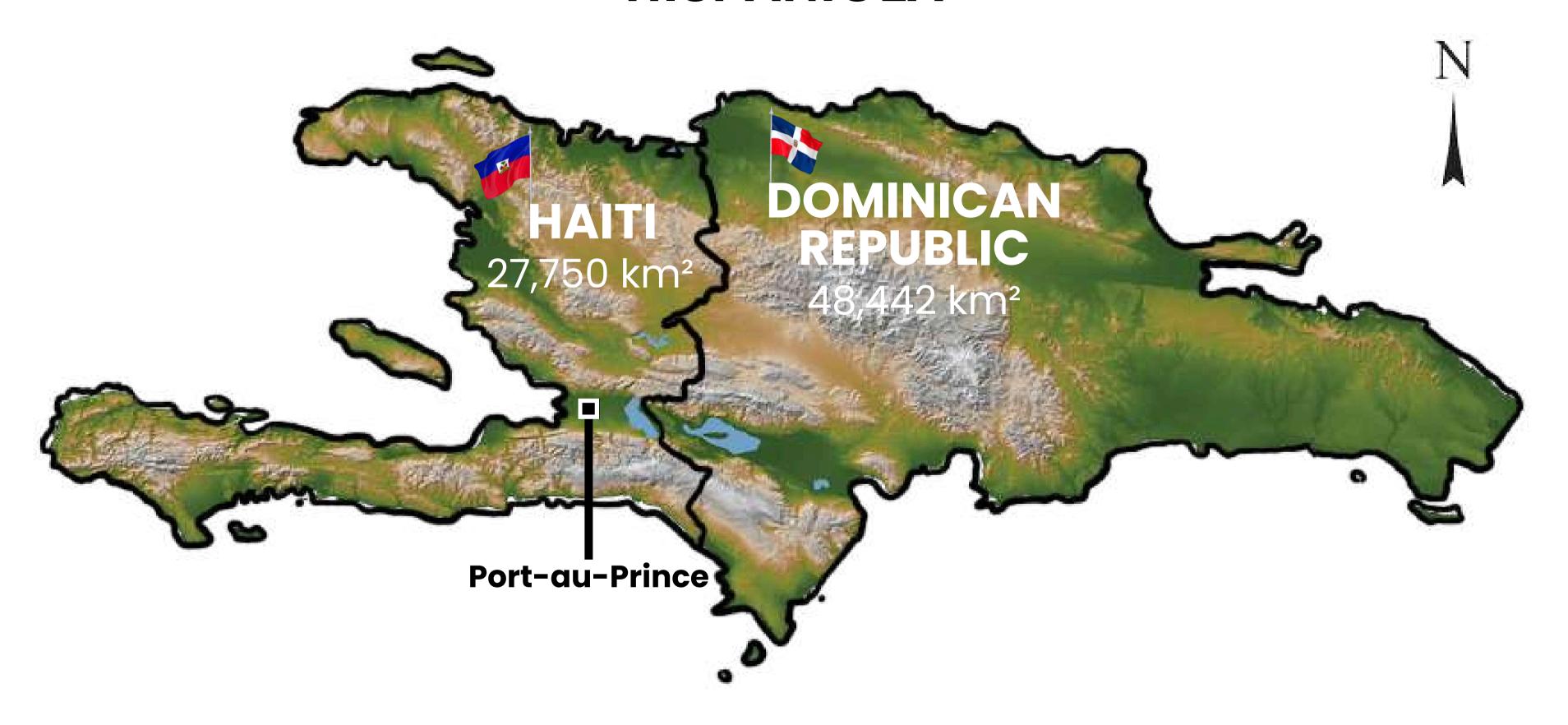
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# INNOVATIVE STRATEGIES FOR PA MANAGEMENT

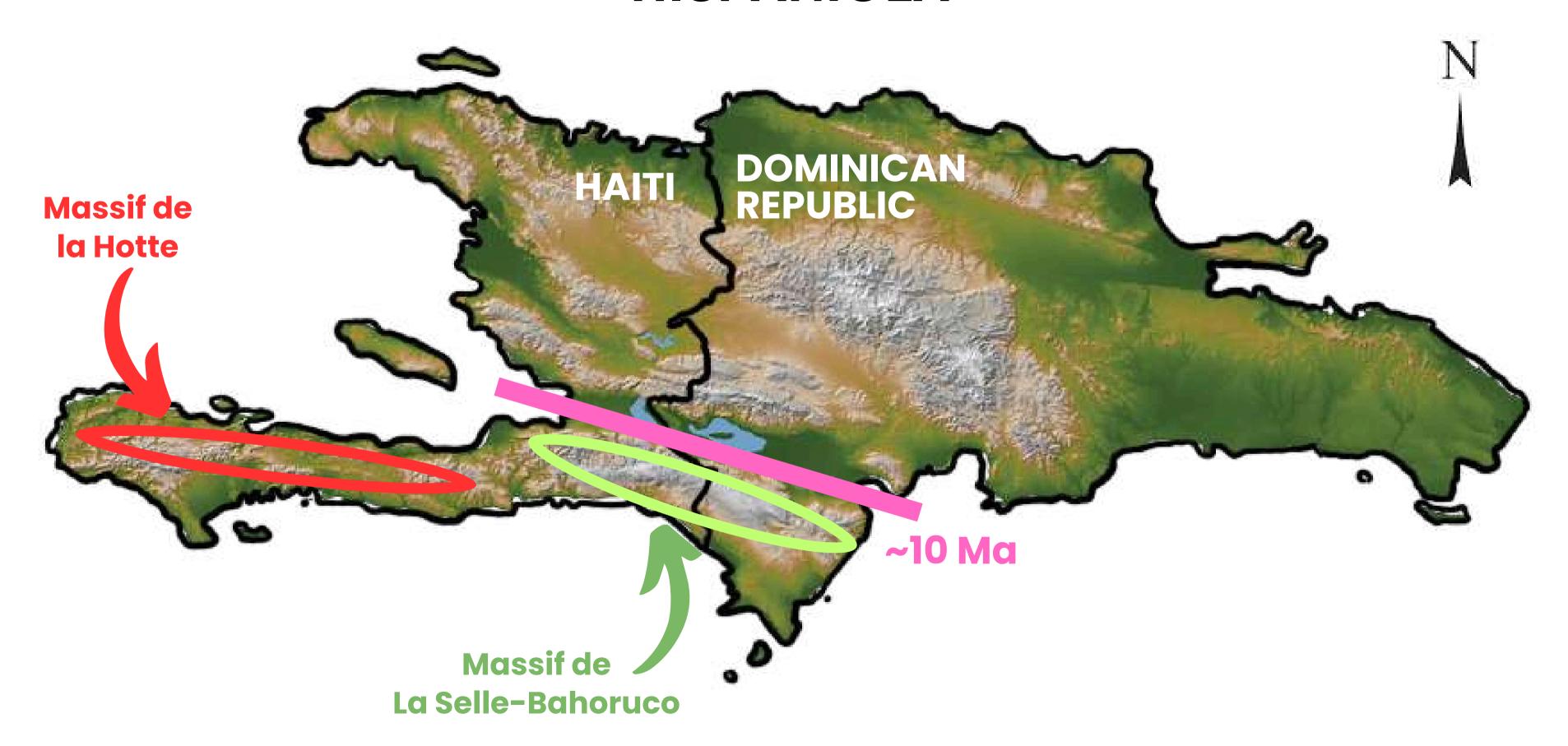
Grand Bois National Park Haiti

Caribaea Initiative 5<sup>th</sup> Conference Martinique, June 2025

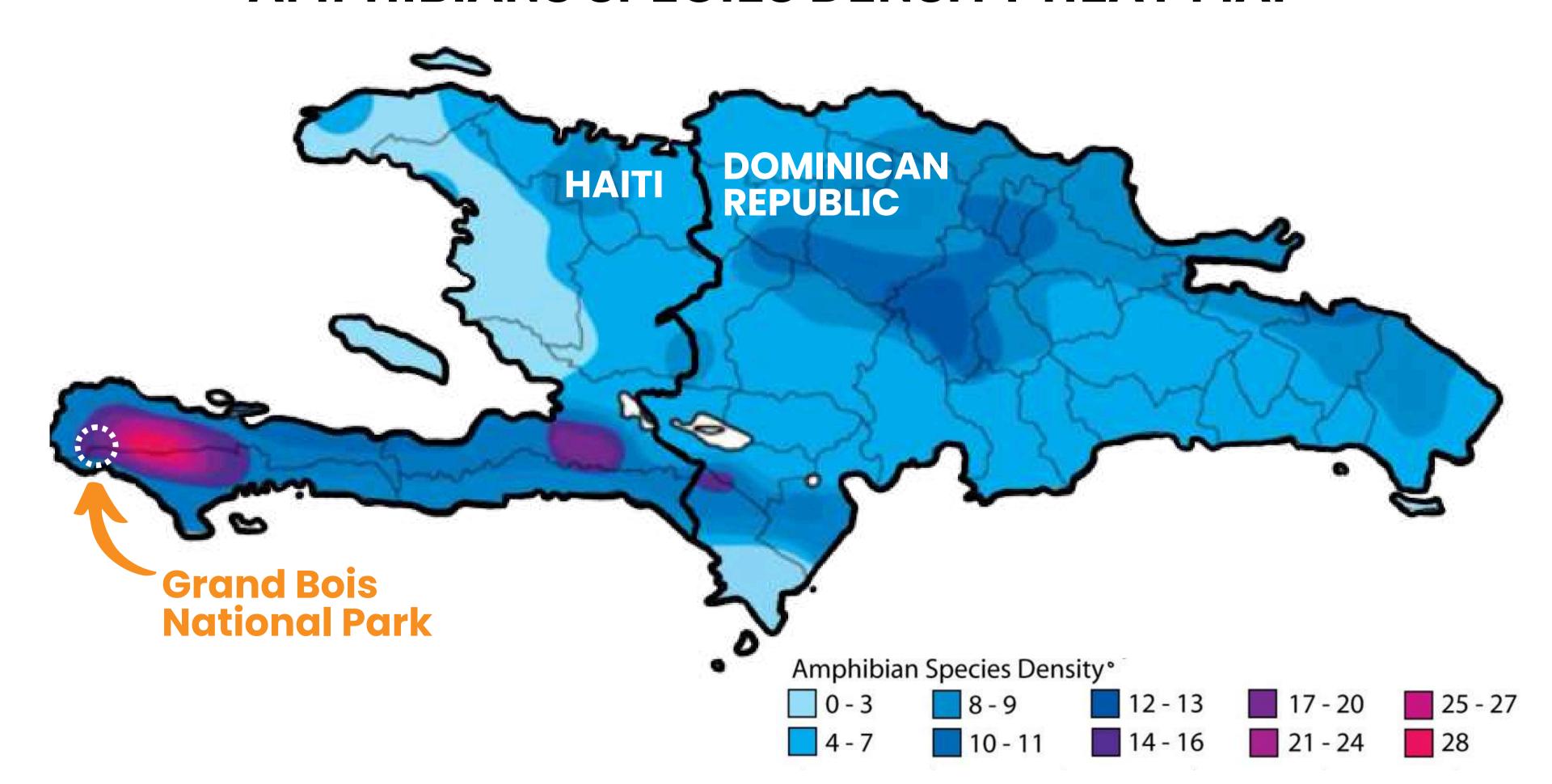
### **HISPANIOLA**



### **HISPANIOLA**



### **AMPHIBIANS SPECIES DENSITY HEAT MAP**

















### Primary habitat Rain forest

Subtropical Cloud Forest (higher altitudes)
Subtropical Rain Forest (lower elevations)





77% Forest cover in 2000 (287 ha)



**1,600 – 2,400mm**Annual rainfall



Soft & hard limestones, serpentine & laterite

### IMPORTANT BIODIVERSIY HOTSPOT

	Total	CR	EN	VU	NT
Birds	48			4	1
Plants	562	3	14	8	2
Reptiles & Amphibians	39	14	4	7	2
Invertebrates	1				



**Phoenicophilus** poliocephalus (NT)



**Magnolia ekmanii** (CR) Eladio Fernandez



**Meriana parvifolia** (CR) Martin Reith



**Anolis monticola** (VU) Jurgen Hoppe



**Eleutherodactylus** semipalmatus (CR) Miguel Landestoy



**Epilobocera** haytensis (VU) Joel C. Timyan

Chales Davies (ebird)

### **BIRDS**

	Total	CR.	EN	VU	NT
Birds	48			4	1
Plants	501	3	13	8	1
Reptiles	15		2	1	2
Amphibians	24	14	2	6	
Invertebrates	1			1	

### All endemic to Hispaniola

### Only bird spp. endemic to Haiti Grey-crowned Palm Tanager

(Phaenicophilus poliocephalus)



HISPANIOLAN PARROT

Amazona ventralis

Jim McCormick (ebird)



WHITE-WINGED WARBLER

Xenoligea montana

Jim McCormick (ebird)



GREY-CROWNED PALM TANAGER

Phaenicophilus poliocephalus

Chales Davies (ebird)



HISPANIOLA TROGON

Temnotrogon roseigaster

Eladio Fernandez (HNT)

### PLANTS

	Total	CR <sup>55</sup>	EN	Vu	NT
Birds	48			4	1
Plants	562	3	14	8	2
Reptiles	15		2	1	2
Amphibians	24	14	2	6	
Invertebrates	1			1	

18% of the second of the secon

Endemic to La Hotte



HAITI SOUTHERN MAGNOLIA

Magnolia ekmanii

Eladio Fernandez (HNT)



N/A Miconia abscondita Martin Reith



FLÈ MALERÈZ\*

Meriana parvifolia

Martin Reith



BWA LÈT\* Sapium haitiense

Martin Reith (HNT)

### REPTILES

	Total	CR	EN 55	VU	NT
Birds	48			4	1
Plants	501	3	13	8	1
Reptiles	15		2	1	2
Reptiles  Amphibians	15 24	14	2	6	2

### All endemic to Hispaniola

33% Endemic to La Hotte



HAITIAN BANDED RED-BELLIED ANOLE

Anolis rupinae

Rene Durocher



LA HOTTE LONG-SNOUTED ANOLE

Anolis dolichocephalus

Rene Durocher



Anolis monticola

Robin Moore (HNT)



HAITIAN GIANT ANOLE

Anolis ricordii

Pedro Genaro Rodriguez

### **AMPHIBIANS**

	Total	CR <sup>®</sup>	EN SE	vu	NT
Birds	48			4	1
Plants	501	3	13	8	1
Reptiles	15		2	1	2
Amphibians	24	14	2	6	
Invertebrates	1			1	

### All endemic to Hispaniola

60% Endemic to La Hotte



TIBURON STREAMFROG

Eleutherodactylus semipalmatus

Miguel Landestoy (HNT)



HISPANIOLAN SHARP-NOSED FROG

Eleutherodactylus oxyrhyncus

Rene Durocher



SPINY GIANT FROG

Eleutherodactylus nortoni

Robin Moore (HNT)



YELLOW CAVE FROG
Eleutherodactylus counouspeus
Blair Hedges (HNT)

### A VITAL WATER RESERVE



Year-round availability of water & food resources

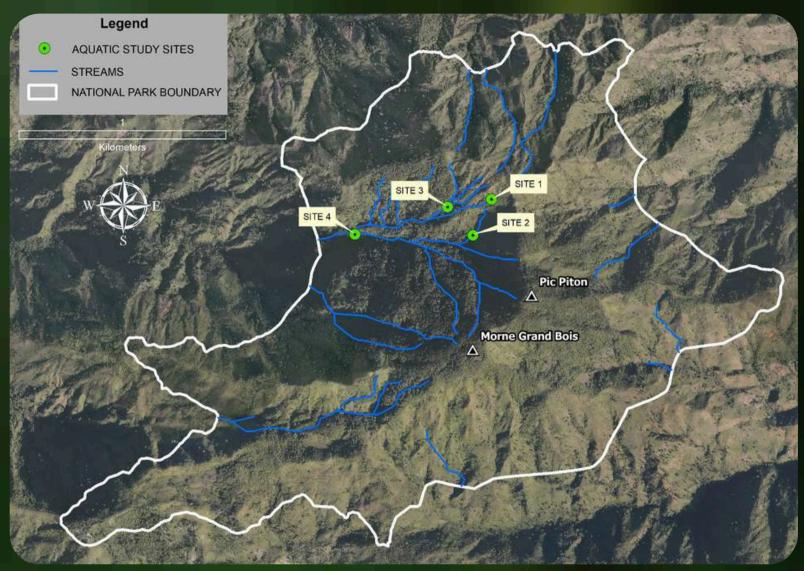


Important for wildlife & migrating birds



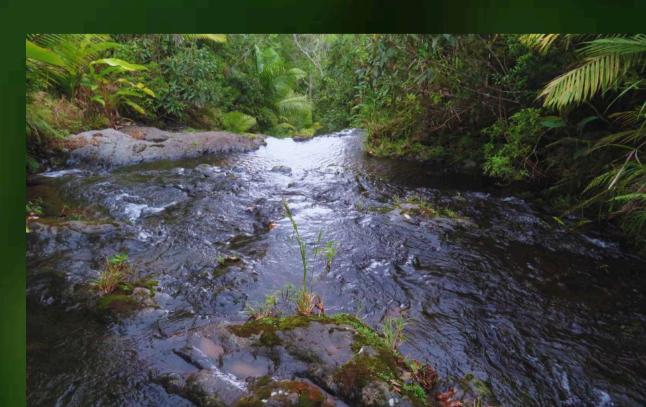
Communities
migrate with
livestock
(threat to the park)

#### Streams in Grand Bois





















#### **LAND USE**

Housing, agriculture, livestock grazing



### RESOURCE EXPLOITATION

Wood cutting mostly for lumber and charcoal production



#### HUMAN MIGRATION

Travel through forests to reach remote locations



#### **OTHERS**

Non-native invasive species, wildlife poaching, natural disasters (hurricanes, earthquakes, landslides, wildfires)













### Management Delegation & Governance

- Land tenure: Purchase land within the park
  - to control access & reduce stressors
  - restoration, conservation & protection
- Contract: First-ever management delegation in Haiti











### Rangers, Threat Mitigation & Law Enforcement

- Rangers: Hired from the community
- Training: Community relations & conflict resolution
- Patrols: Deter illegal activities & law enforcement











### Habitat Restoration & Reforestation

- Native Species: Restoration with natives & endemics
- Invasive Plants: Sustained removal
- Monitoring: Reforestation success & species recovery











### Species Conservation & Biodiversity Protection

- Targeted Species: IUCN Red Listed & endemic wildlife habitat needs; critical habitats
- **Ecosystem & Habitat Quality:** Expansion of primary forest populations; maintenance of genetic & habitat diversity











### Community Engagement & Buy-in

- Community Involvement: Hired to maintain park
- Livelihoods: Agroforestry & honey production
- **Education & Awareness:** Workshops, meetings, trainings



### REFORESTATION EFFORTS

Since 2022

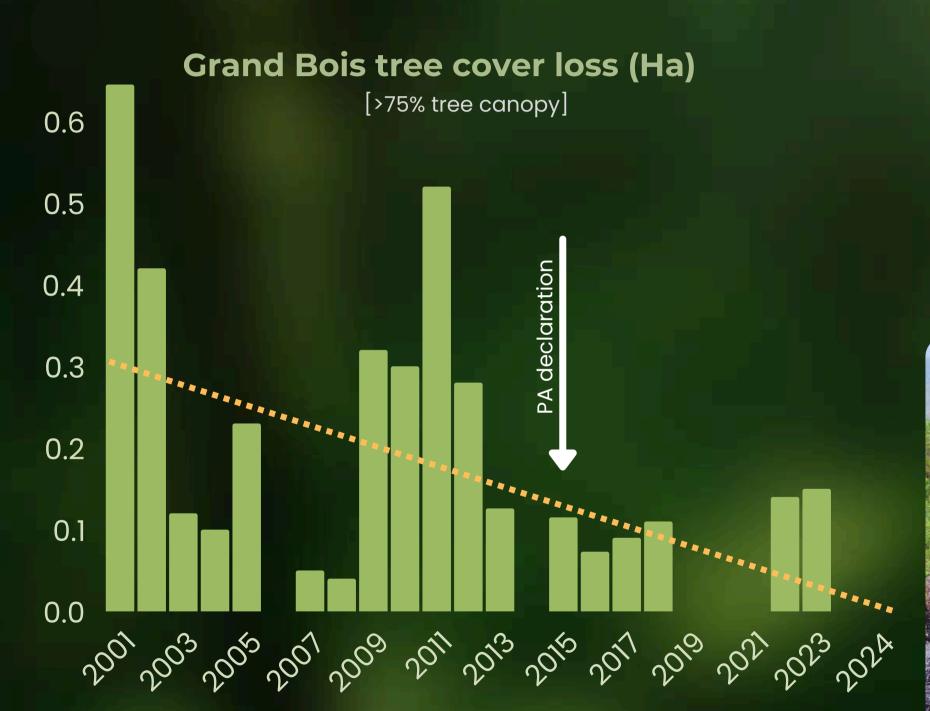








# ECOSYSTEM RECOVERY



#### Source: Global Forest Watch

#### Natural forest cover stable

- o deforestation on the decline for the park as a whole
- deforestation occurs where land pressure is greatest
- some tree cover loss is natural (landslides, hurricanes)
- Areas cleared: relatively small & rapid recovery

#### Recovery of forest ecosystem in GB (9 years)



<sup>\*</sup>Deforested plot: tree cutting, drought, wind damage, landslides etc.

<sup>\*\*</sup>Natural disasters have played an insignificant role in the loss of forest cover

### **IMPACT**



Restoration contributing to ecosystem recovery



Enhanced community support

(40% women)



Critical habitats for endangered species are protected

# GONCLUSION



initiatives are pivotal to the sustainability of GB

Restoration efforts
are not just
ecological but
socio-economic

#### **Land tenure**

& private park protection are critical to restoration succes

#### Restoration

efforts must continue for the future of the GB rainforest





















## THANK YOU

