Ecology and Biodiversity in Aruba

The Pedagogical Institute of Aruba (IPA)

Nature and Technology Department

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Content

- Biodiversity vs. Island Biodiversity
- Biotic and abiotic factors
- Types of ecosystems
- Mangroves, national tree and animals
- Adaptations and biodiversity
- Questions

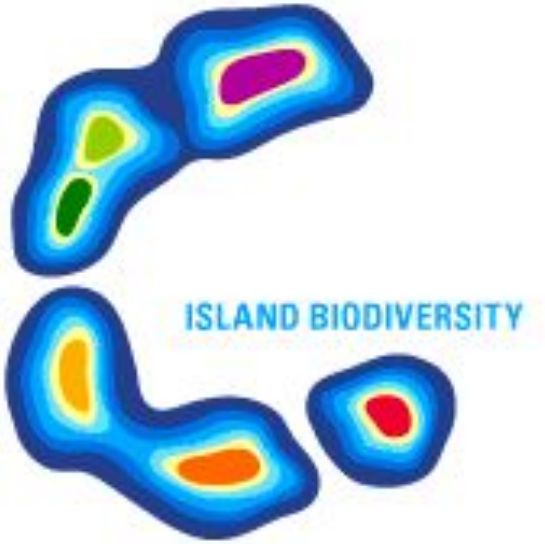
Objectives

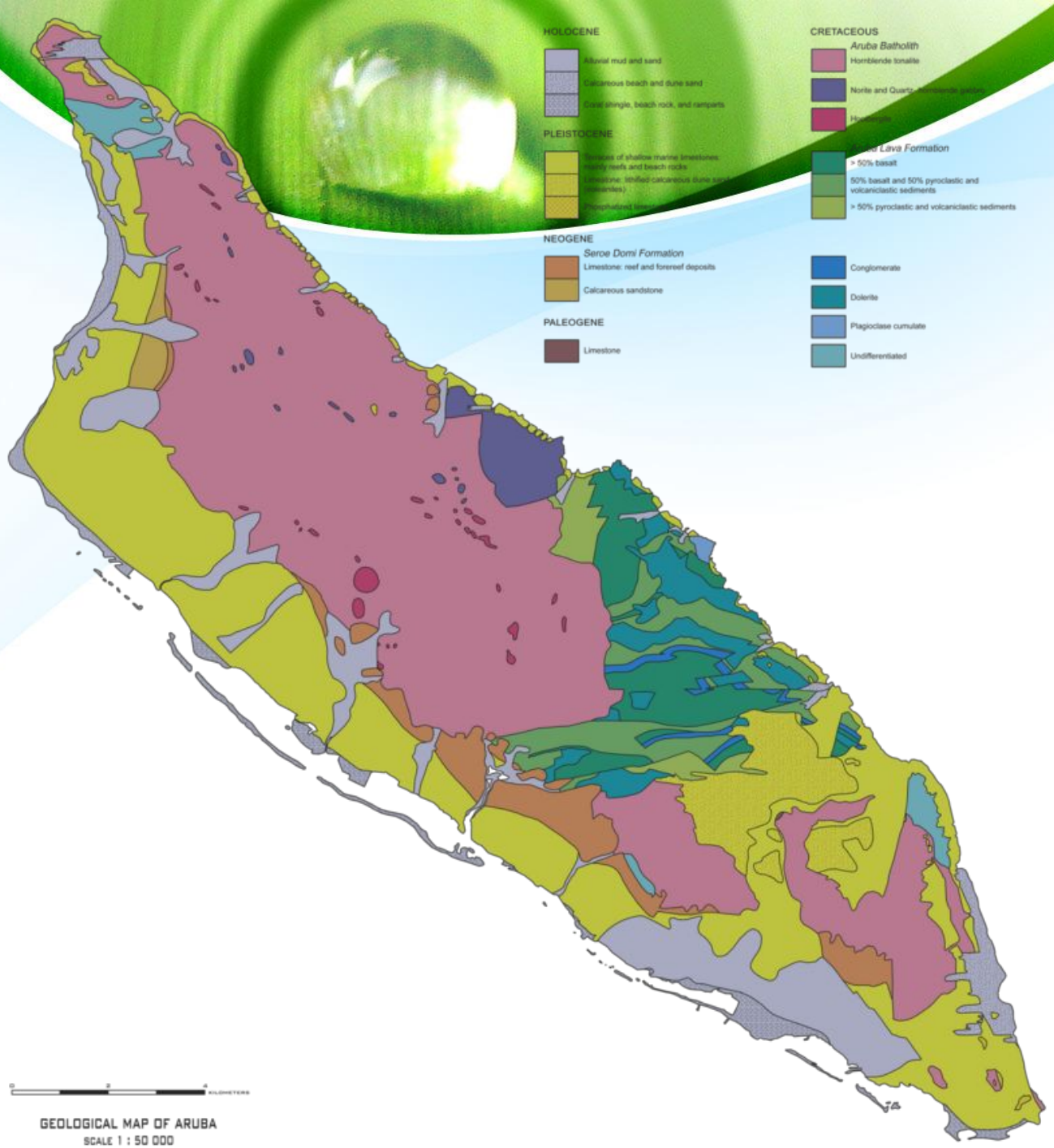
- Explain the concept of Island biodiversity vs biodiversity in general
- Explain the role of biotic and abiotic factors on biodiversity
- Summarize the types of ecosystems on the island
- Recognize mangroves and the national tree, through there unique adaptations to the environment
- Recognize the national bird's habitat and plumage

Key concepts:

*Biodiversity, ecology, biotic and abiotic factors, adaptations, mangroves.

Biodiversity

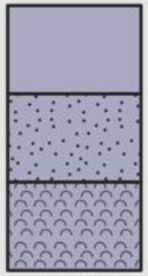




GEOLOGICAL MAP OF ARUBA

SCALE 1 : 50 000

HOLOCENE

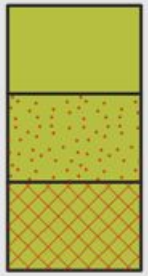


Alluvial mud and sand

Calcareous beach and dune sand

Coral shingle, beach rock, and ramparts

PLEISTOCENE



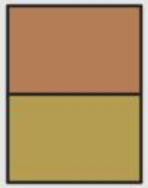
Terraces of shallow marine limestones: mainly reefs and beach rocks

Limestone: lithified calcareous dune sand (eoleanites)

Phosphatized limestone

NEOGENE

Seroe Domi Formation



Limestone: reef and forereef deposits

Calcareous sandstone

PALEOGENE

Limestone

CRETACEOUS

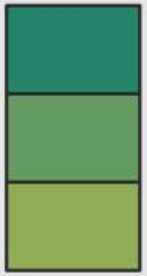
Aruba Batholith

Hornblende tonalite

Norite and Quartz- hornblende gabbro

Hooibergite

Aruba Lava Formation



> 50% basalt

50% basalt and 50% pyroclastic and volcaniclastic sediments

> 50% pyroclastic and volcaniclastic sedimer

Conglomerate

Dolerite

Plagioclase cumulate

Undifferentiated

Biotic

Fungi

Plants

Animals

Protists

Archare

Bacteria

Abiotic

Soil

Light

Water

Air

Humidity

Temperature

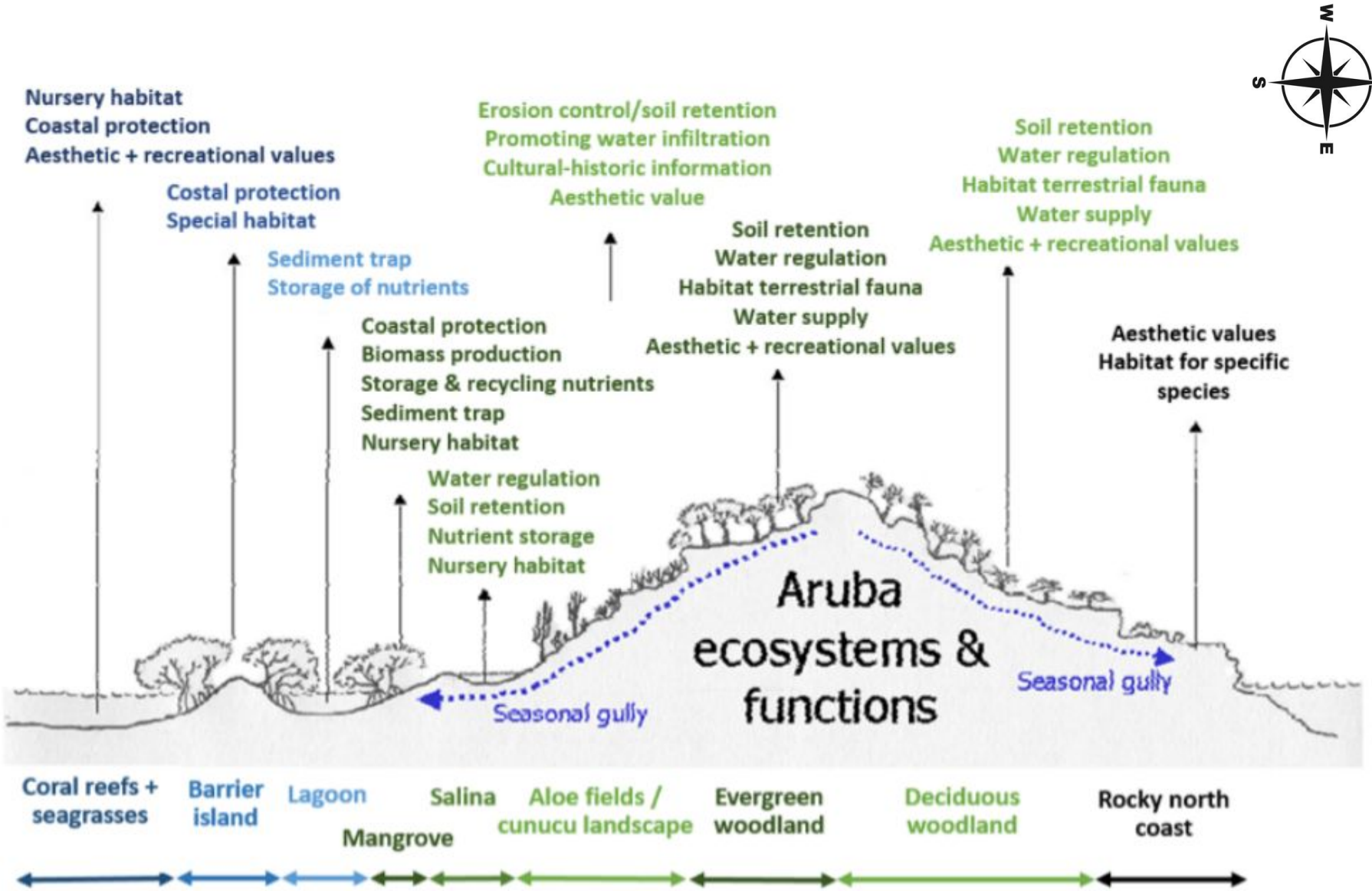


Figure 4: Schematic cross-section of Aruba's main ecosystems and its functions. Adapted from Van der Perk (2002)

Figure 3: Casibari *(left), Arikok National Park (center) and Natural Pool (right) (source: Aruba Tourism Authority, 2017)*

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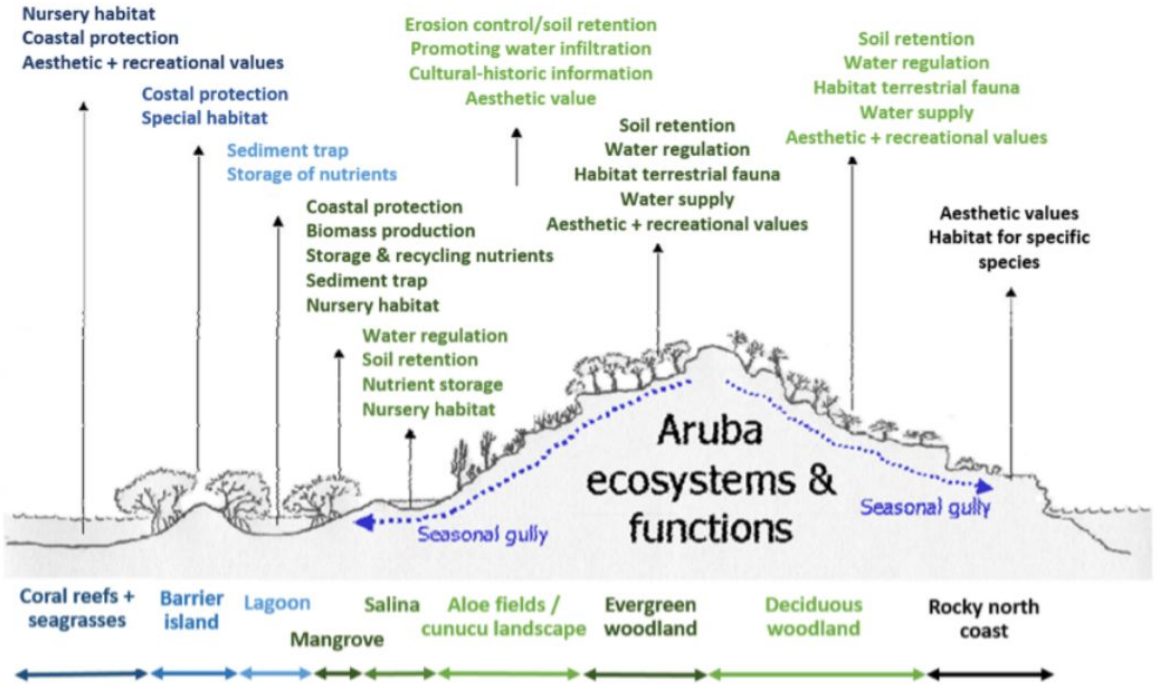

Figure 4: Schematic cross-section of Aruba's main ecosystems and its functions. Adapted from Van der Perk (2002)

Columnar catus species

Stenocereus griseus
Dader/ Cadushi, Dagger cactus

Cadushi (Zuilcactussen)

Cereus Repandus
Breba, Peruvian apple cactus

Tuna (Schijfcactussen) - Angel wing Cactus

Opuntia caracassana
Infrou/ Tuna
Common prickly pear

Opuntia curassavica
Tuna di Colebra, Cushihuri
Cylindricaly prickly pear

Your interest/ Questions

Mangel (Mangroven) - Mangroves

1

2

Rizophora mangle L.
Mangel cora or Mangel Tam
Red Mangrove

Avicennia germinans L.
Mangel preto
Black Mangrove

Mangel (Mangroven) - Mangroves

3

4

Languncularia racemosa L.
Mangel blanco
White Mangrove

Conocarpus erectus L.
Fofoti
Green buttonwood

Caesalpinia coriaria (Jacq)
Watapana - Divi Divi

Caesalpinia coriaria (Jacq)
Watapana - Divi Divi

Conocarpus erectus L.
Fofoti
Green buttonwood

Franse Pas

Palm Island

Bushi - Barrel cactus

Prikichi- Parakeet

Cascabel- Rattle snake

Shoco -burrowing owl

Aruba birdlife conservation (2011)

Mangel Halto

Guadarikiri Cave system

Pool/ beach at Bushiribana

Black Mangrove

Black mangrove: *Avicennia germinans*


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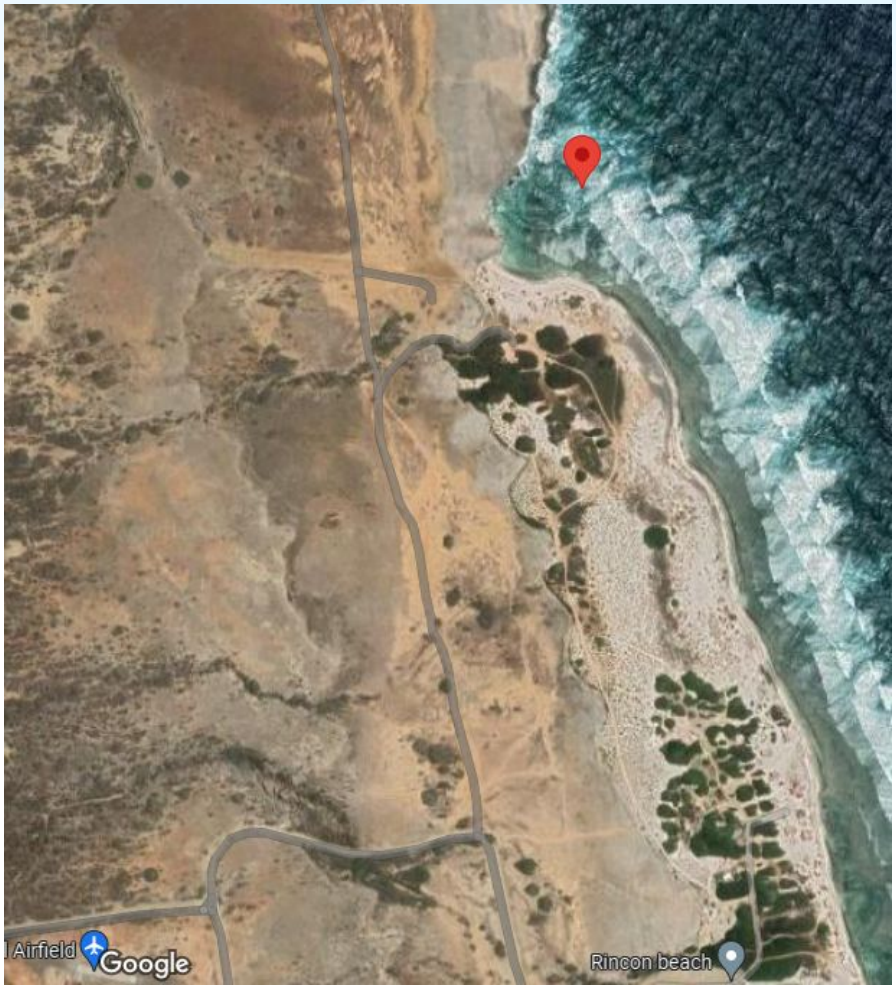
Why are adaptations and biodiversity SO important?

Allows organisms to adjust and survive in their natural habitat

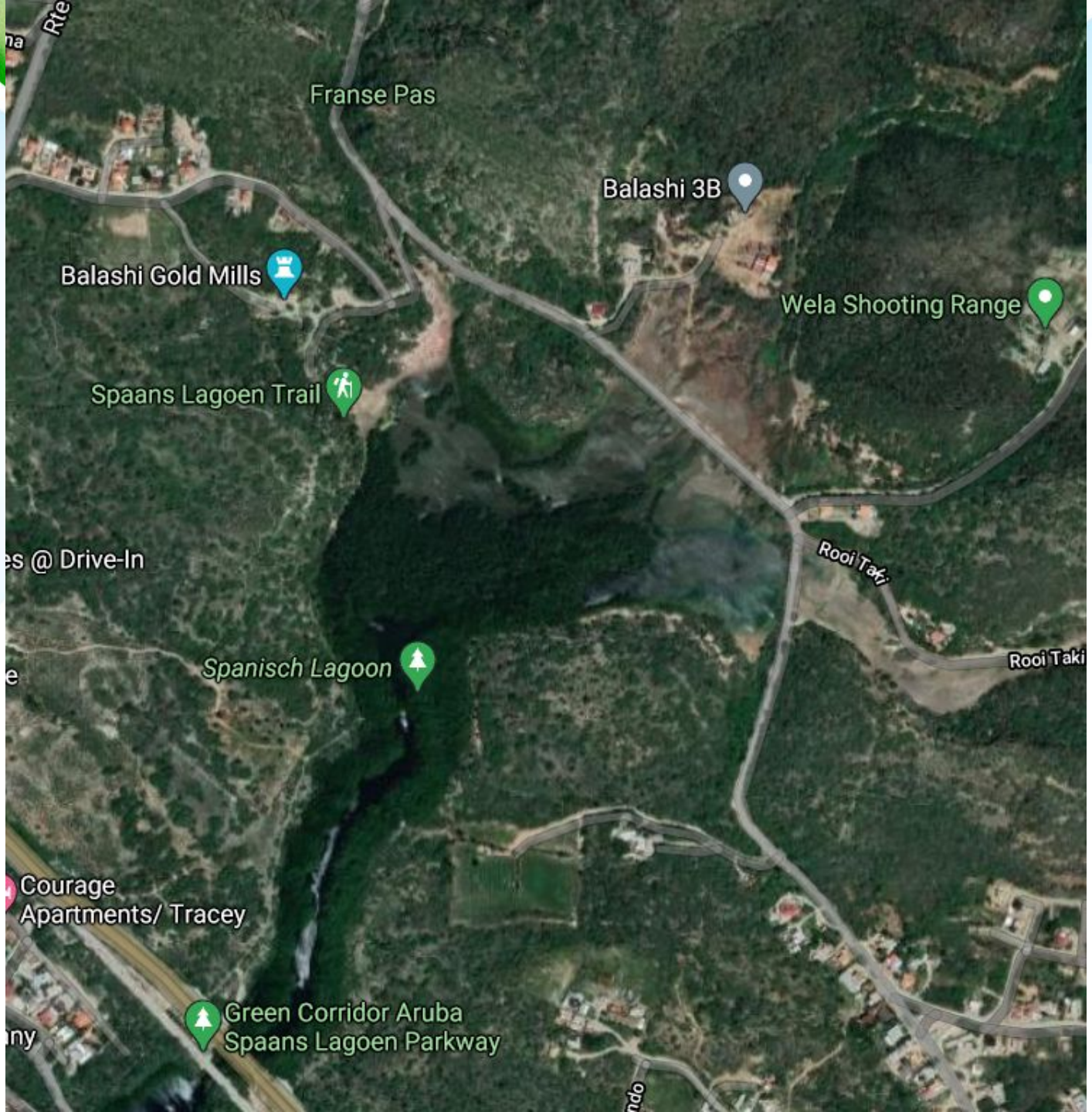
Assists them in their basic needs for survival: finding, food, water, shelter.

Allows organisms to live and survive long enough to reproduce and produce offsprings

Rincon



Virtual tour Franse Pas


Franse Pas
Balashi 3B
Balashi Gold Mills
Wela Shooting Range
Spaans Lagoen Trail
Rooi Taki
Rooi Taki
Spanisch Lagoon
Courage
Apartments/ Tracey
Green Corridor Aruba
Spaans Lagoen Parkway


Balashi Gold Mills
Parkeren
Shoco's
Spaans Lagoen Trail
Spanisch Lagoon

We must start by finding our connection back, through nature, with the Soul of our Mother Earth, which connect us all as relatives.

Kewanee Lapseritis, MS, MH

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