

Science informing policy and setting the stage for responsible ecotourism in the Gran Caldera Scientific Reserve, Equatorial Guinea

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Bioko Biodiversity Protection Program



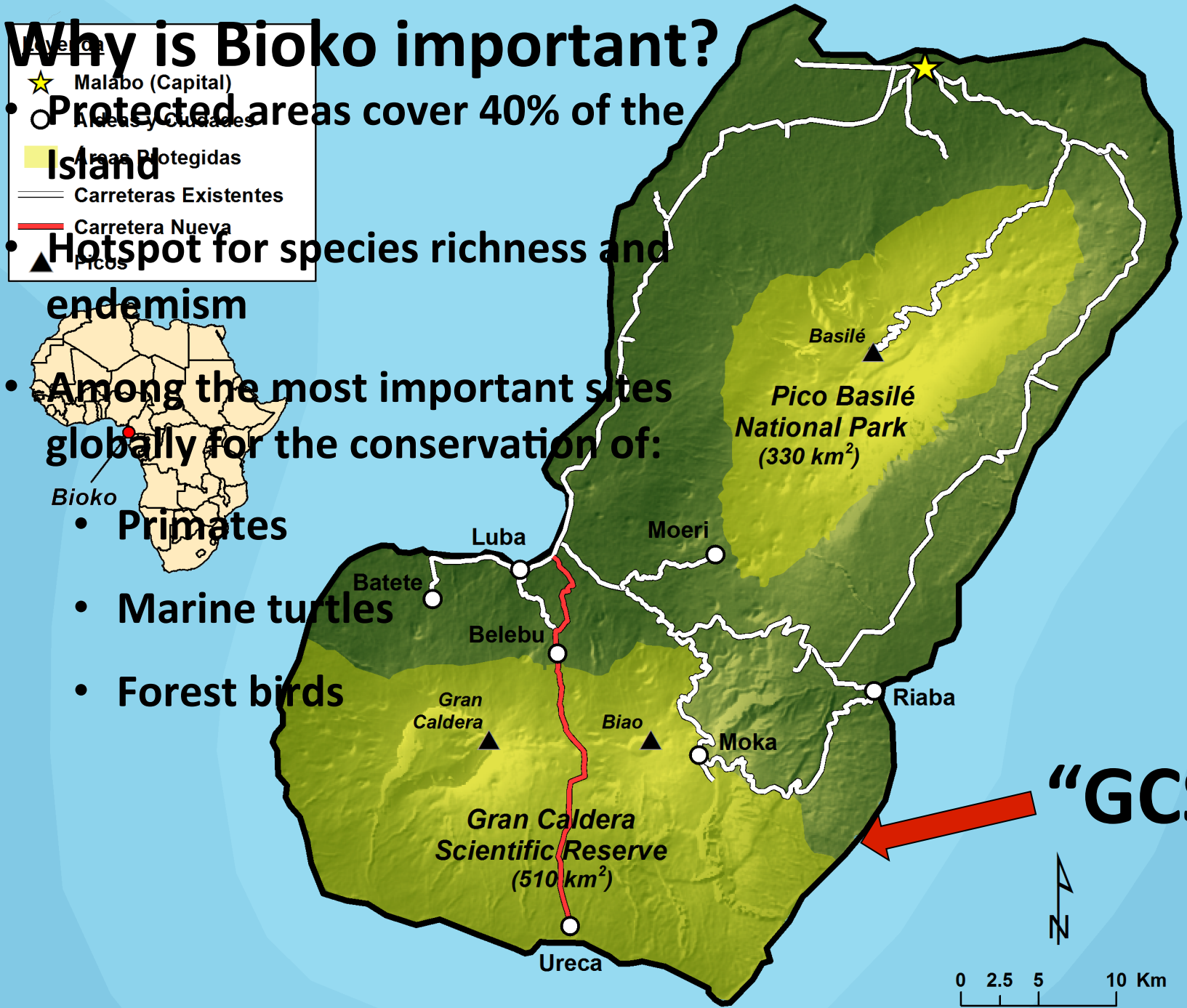
Why is Bioko important?

- Protected areas cover 40% of the Island

- Hotspot for species richness and endemism

- Among the most important sites globally for the conservation of:

- Primates
- Marine turtles
- Forest birds



“GCSR”



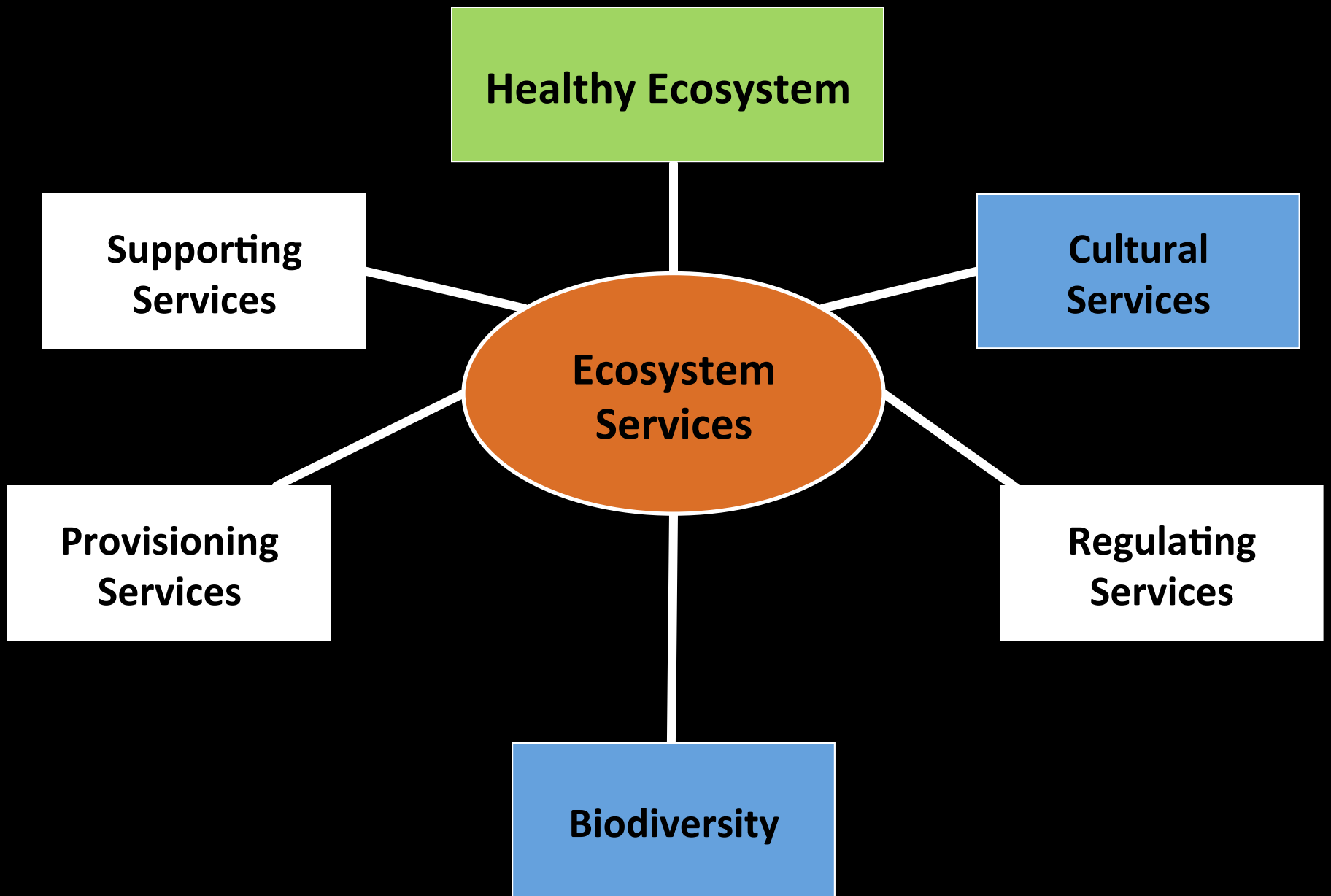
Laman



Cronin



Laman



Why is Bioko's biodiversity important?



Monkeys: High densities of seven species of endangered monkeys live in Bioko's forests.

"Bioko Island is the single most important place in Africa for primate conservation action."

-- IUCN/SSC Primate Specialist Group



Nesting sea turtles: Four species of sea turtles nest on the ~12 miles of Bioko's southern beaches, including many leatherbacks and green turtles.



Frogs: Bioko's deep mountain valleys and high rainfall are very conducive to frog speciation. Frogs are also very sensitive to changes in climate.

How does biodiversity create a healthy ecosystem?

1. Large numbers of healthy primate, bird, and small mammal populations

2. **Biodiversity** → Able to cover a broad area for seed dispersal

3. Greater plant success and diversity



Negative Cascading Effects

Increased hunting activity in GCSR



Decreased primate populations



Decreased seed dispersal
(over area and species)



Decreased biodiversity



Degradation of ecosystem services



Collapse of local communities



How does the GCSR provide cultural services?

- Abundant food resources
- The last traditional Bubi village is in the GCSR



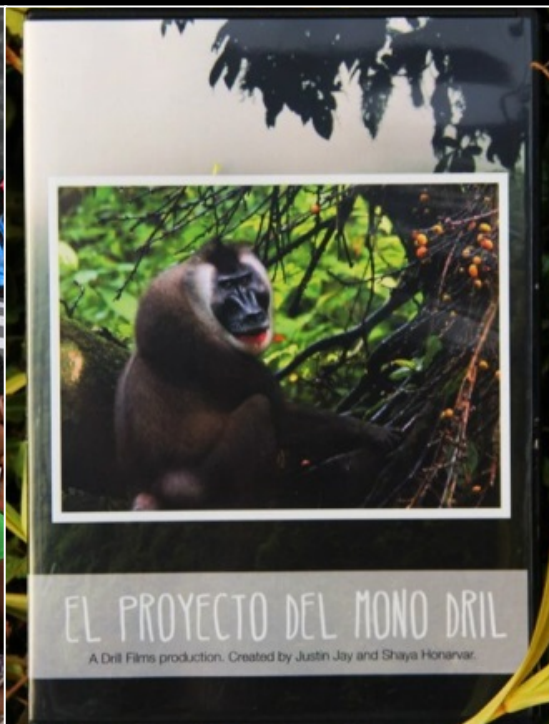
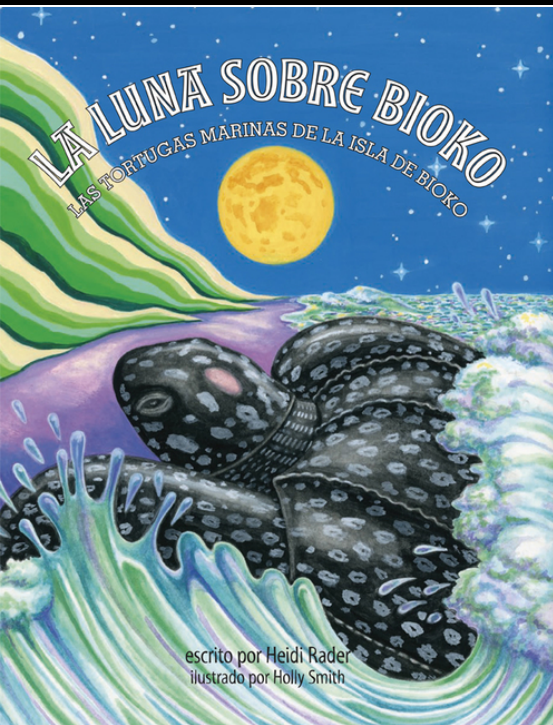
How does the GCSR provide cultural services?

- The Bioko Biodiversity Protection Program (BBPP) employs and trains local citizens as biomonitors



How does the GCSR provide cultural services?

- Serves as a venue to teach the public about the value of protecting their ecosystem



How does the GCSR provide cultural services?

- A focal point for collaboration for the National University of Equatorial Guinea (UNGE) to create leaders of the next generation knowledgeable in conservation



Montgomery



How does the GCSR provide cultural services?

- Moka Wildlife Center
 - Several annual university courses and educational outreach for school-aged children



How does the GCSR provide cultural services?

- Two seasonal camps on the GCSR beaches
 - Primate censuses, monitoring of nesting turtles & other research projects



Challenges and opportunities

Beach D June 2015



Challenges and opportunities

- Ecotourism



Challenges and opportunities

- Micro-enterprising



Translating ecosystem services to improve GCSR protection



Bioko Biodiversity Protection Program Strategic Plan

Version 1.0

July 2014



El Futuro de la Reserva Científica de la Gran Caldera

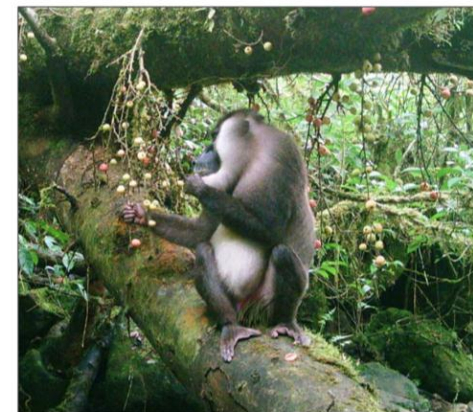
Traduciendo la ciencia en la normativa para desarrollar un plan de
manejo eficaz para la Reserva Científica de la Gran Caldera



Versión 1.0 - Mayo 2015



OPORTUNIDADES PERDIDAS: EL RAPIDO DETERIORO DEL ESTADO DE LA CONSERVACION DE LOS MONOS DE LA ISLA DE BIOKO, GUINEA ECUATORIAL, (2010)



Un informe preparado por el Programa de Protección de la Biodiversidad de Bioko (BBPP), en el marco
de colaboración entre la Universidad de Drexel y la Universidad Nacional de Guinea Ecuatorial (UNGE)




- Work with UNGE to advise the Government of Equatorial Guinea on best conservation practices

Challenges and opportunities

- **Improve international engagement**
 - **Creating new partnerships with international research and educational organizations to promote regional cooperation**



A promising future



Low human
population
density

Ziegler



Steep, intact
habitat

Laman



Successful
academic
partnership



Increasing
government
involvement



Acknowledgements



República de Guinea Ecuatorial
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Dirección General de Medioambiente



*Al servicio
de las personas
y las naciones*



Acknowledgements



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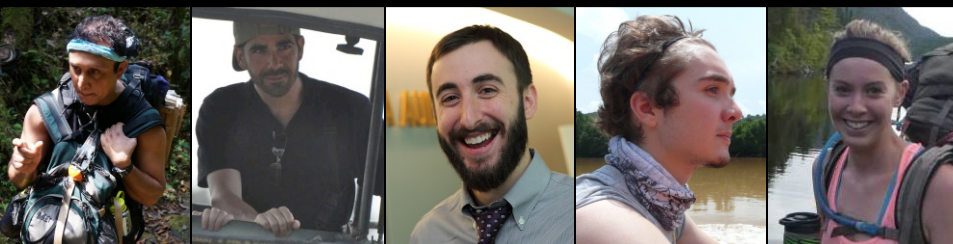
Reginaldo
Aguilar

Silvia
Moka

Marta
Bindang

Melanie
Croce

Bryan
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Matt
Mitchell

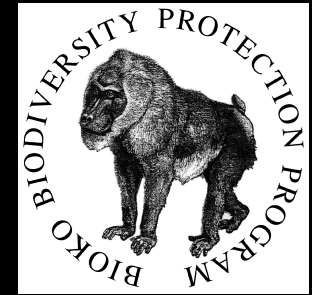
Paul
Sesink Clee

Dana
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**The towns of Ureca and Moka.
All of our students,
volunteers, collaborators,
friends, and partners.**

Contact Us



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Thank you