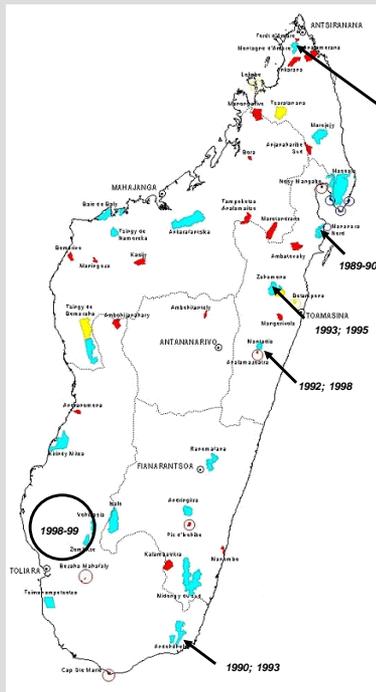


Madagascar's Biodiversity Conservation Challenge: from Local- to National-Level Dynamics



Nadia Rabesahala Horning
Department of Political Science
Middlebury College

Workshop on Forest Governance and Decentralization in Africa
Durban, So. Africa April 8-11, 2008



Observation 1: Variation in conservation behavior

Observation 2: Strong support for conservation

Observation 3: Deforestation remains a challenge

↓
Biodiversity and livelihoods are threatened

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Puzzle:

Results are not commensurate with support (institutional and financial) for conservation.

Question:

Why is conservation performance not better?

Argument:

Conservation policies and projects fail to recognize the *specific* and *limited* conditions under which conservation is possible.

Case:

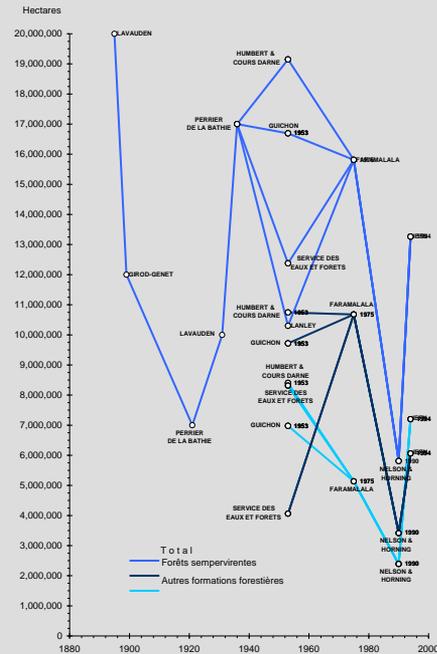
Madagascar's "environmental sector" (mid-1980s to present).

Method:

Two-level institutional analysis.

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Forest Cover Estimates for Madagascar



Source: *Inventaire Ecologique Forestier National* (1996)

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Est. 1: 20 million hectares to 9 million hectares in the past 30 years

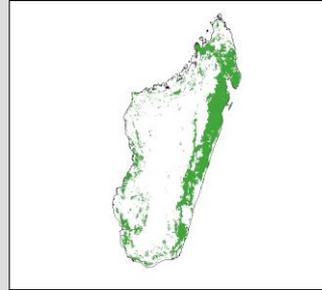
Est. 2: 1950s-2000: decrease in forest cover by +/- 40%

Forest Cover Changes, 1990-2005

Forest Cover	Total Hectares
1990	10,668,800 (18.0%)
2000	9,677,701 (16.3%)
2005	9,216,617 (15.6%)

Annual Deforestation Rate

1990-2000	.83%
2000-2005	.53%



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Regulations

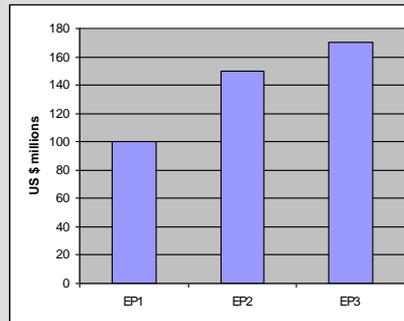
- International conventions
- National legislation
(code forestier; NRM decentralization)
- Community-devised rules

Conservation Institutions

NEAP
ANGAP
ONE
GELOSE
NGOs, etc.



NEAP Funding (1991-2008)



Source: Rakotoarjaona int.. (2005)

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Deforestation: State Actors' Perspective



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Conservation Models: Assumption 1



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September 2003: Big Conservation News

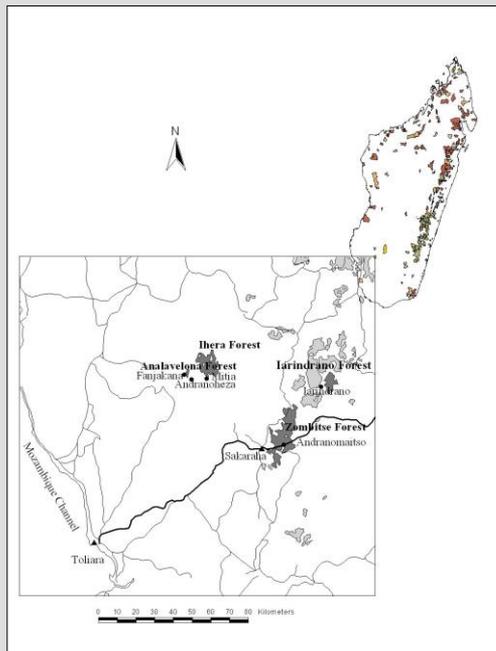
Madagascar to triple the surface of its protected areas from 1.6 million to 6 million hectares in 5 years (2004-2009)



"We can no longer sit back and allow our forests to go up in flames."

President Marc Ravalomanana

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Evidence from Bara Land

170 individuals (men; women)

5 communities

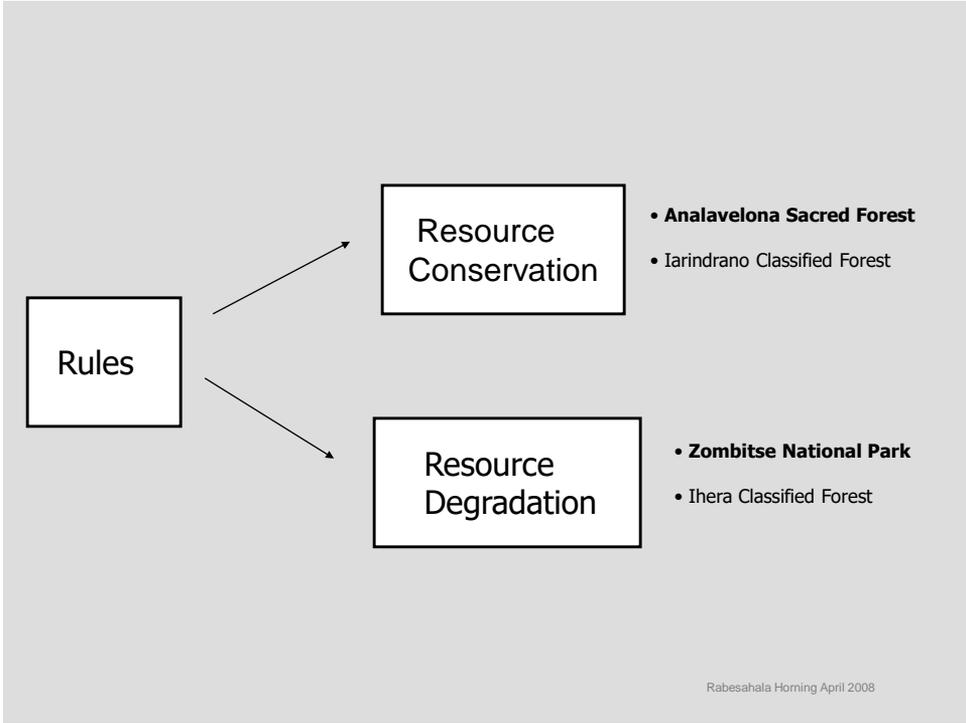
4 forests

1 national park (Zombitse)

1 sacred forest (Analavelona)

2 classified forests (Ihera; Iarindrano)

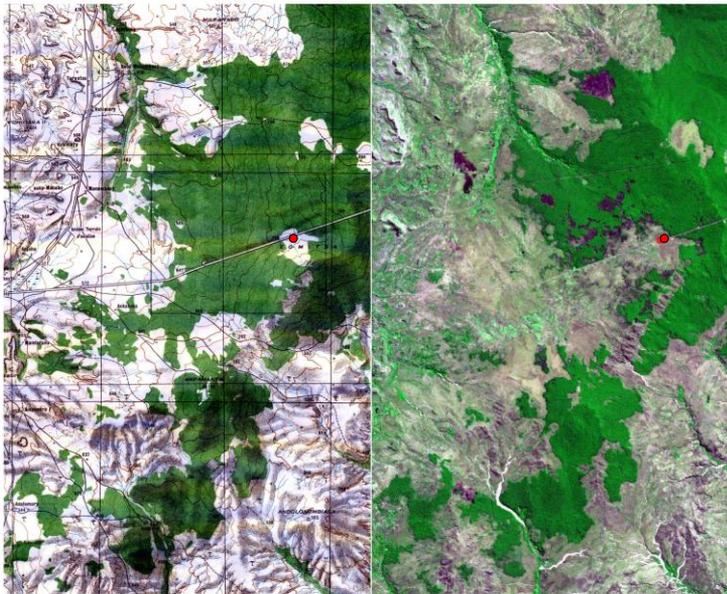
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Zombitse National Park

1949

April 11, 1989



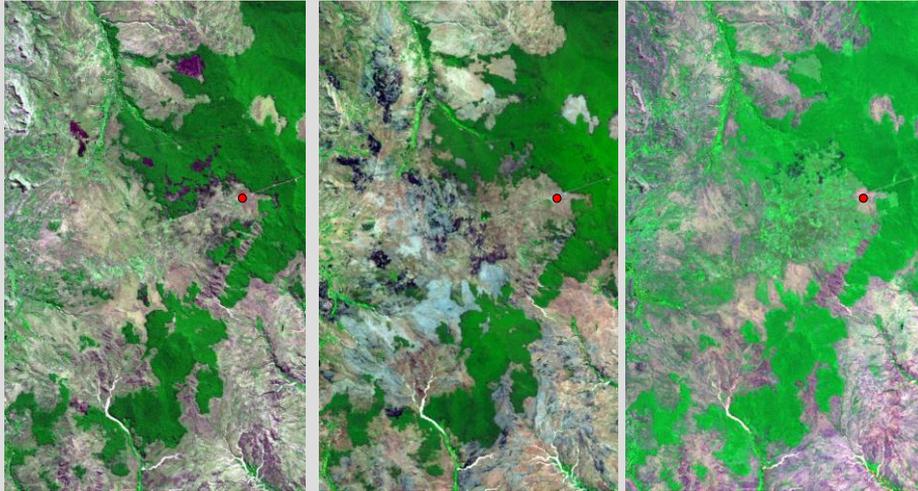
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Zombitse National Park

April 11, 1989

August 23, 2000

March 25, 2003

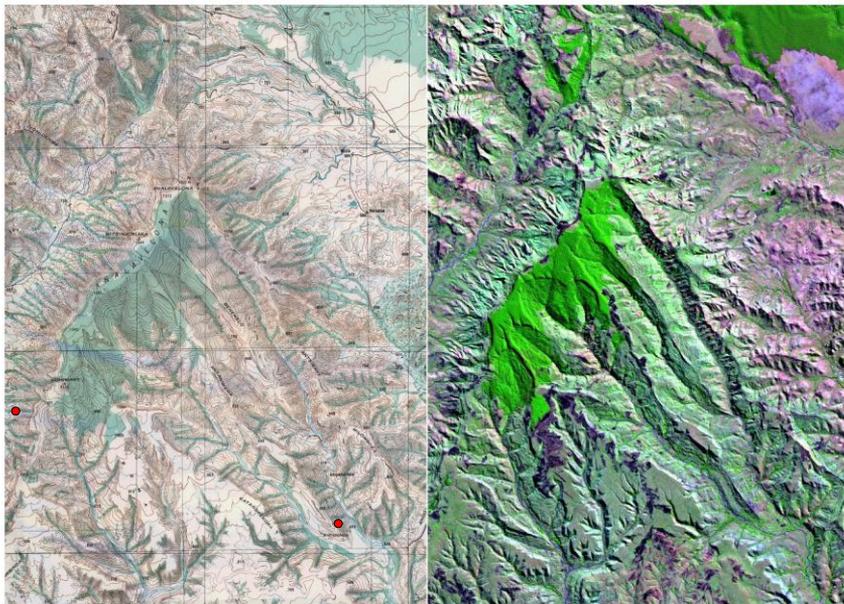


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Analavelona Sacred Forest

1949

April 11, 1989



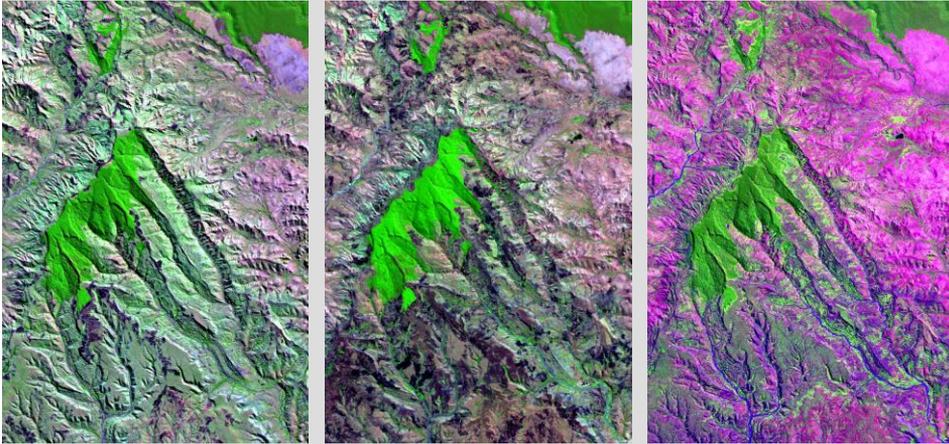
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Analavelona Sacred Forest

April 11, 1989

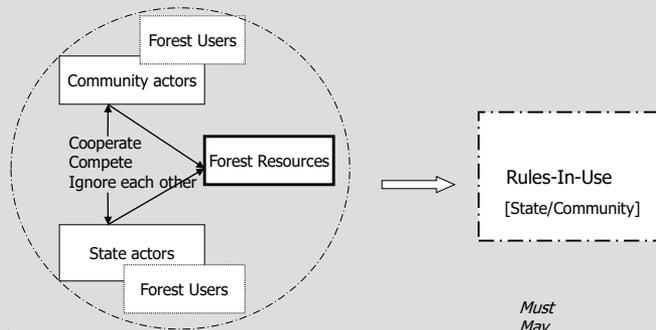
August 23, 2000

March 25, 2003



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What Rules, and Where Do They Come From?



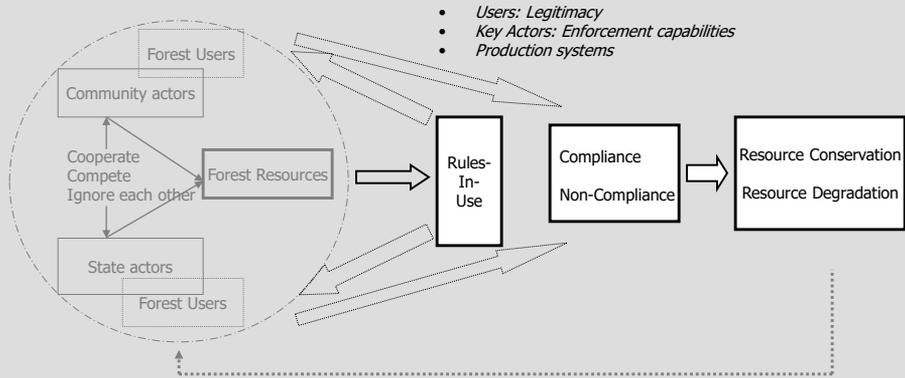
Dynamic Context:

- Economic
- Demographic
- Ecological
- Cultural
- Political

Must
May
Must not
... or else

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The Connection between Rules and Conservation: Community Level



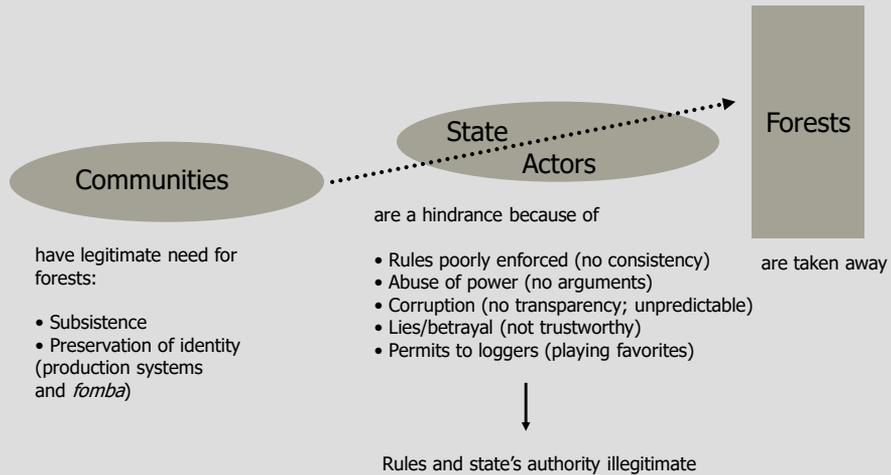
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Conditions for Resource Conservation (RC) and Resource Degradation (RD): **Community Level**

	Resource Conservation	Rules are critical	RC
Key actors' interests converge	Resource Exploitation	Rules become irrelevant	RD
	Strong enforcement capabilities		RC
Key actors' interests diverge	Weak enforcement capabilities		RD

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Deforestation: Communities' Perspective



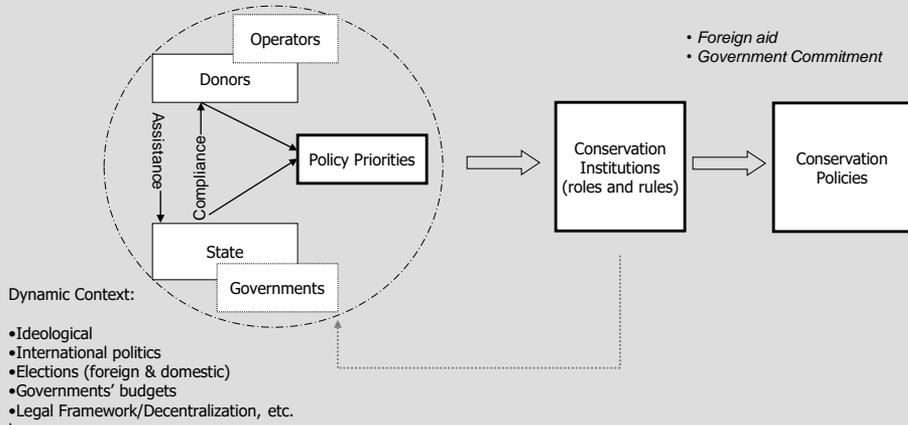
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Conservation Models: Assumption 2



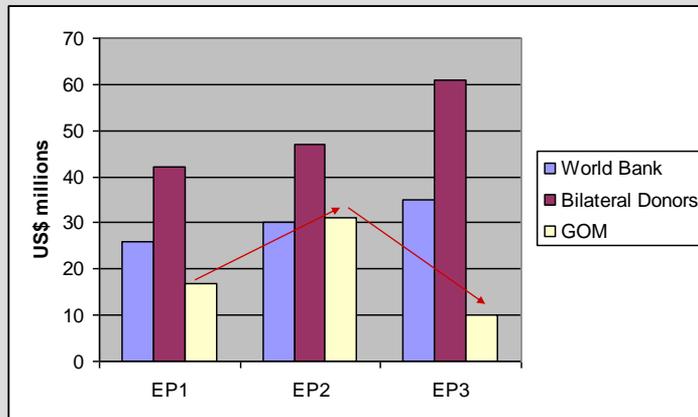
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National-Level Politics: Madagascar's "Environmental Sector"



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Financial Contributions to NEAP (1991–2008)



Source: World Bank (various reports)

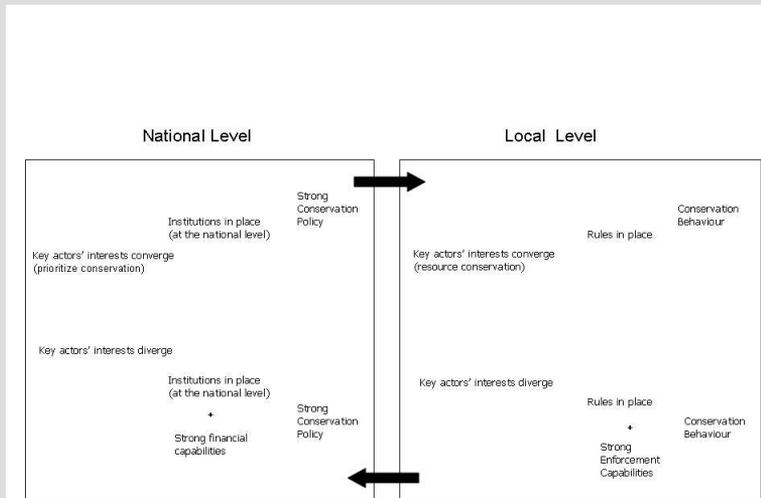
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Conditions for Strong vs. Weak Conservation Policy Commitment: **National Level**

Key Actors' Interests	Key Actors' Priorities	Conservation Institutions	Likely Policy Outcome
converge	Conservation: high	Institutions Matter (at the national level)	Strong on Conservation (pending foreign support)
	Conservation: low	Conservation Institutions Less Relevant	Weak on Conservation
diverge	Strong financial capabilities	Institutions Matter (at the national level)	Strong on Conservation (pending Government Cooperation)
	Low financial capabilities	Conservation Institutions Less Relevant	Weak on Conservation

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The Limited and Specific Conditions for Conservation



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Conclusions

Assumptions of conservation models are, at best, flawed. As a result conservation policies are misguided and resources wasted.

Two realms of environmental decision-making are active, dynamic, but disconnected.

Bridging the gap between the two realms requires recognition that conservation is possible only under limited and specific conditions at the two decision-making levels.

A reversed, incremental approach is imperative.



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Why It Matters



Rural Livelihoods

- Subsistence
- Culture



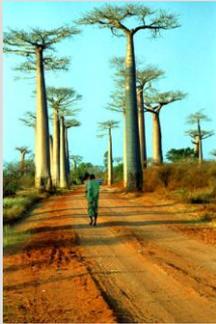
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Why It Matters

Madagascar's Biodiversity

- 12,000+ endemic species of plants
- 5 endemic families of birds
- 346 species of reptiles
- 154 species of amphibians
- 5 families and 48 + species of lemurs



Rabesahala Homing, March 25, 2008