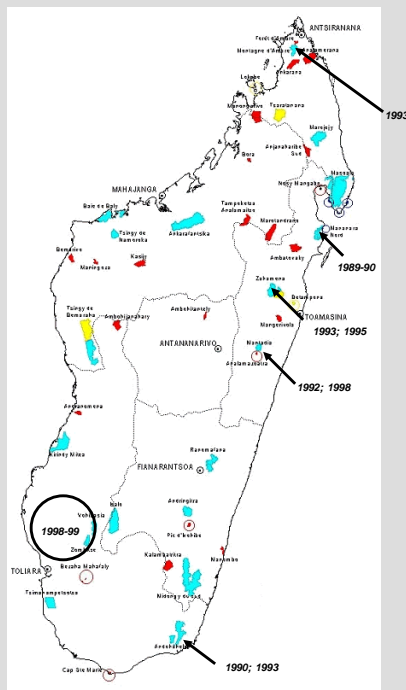


## Madagascar's Biodiversity Conservation Challenge: from Local- to National-Level Dynamics



**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:**

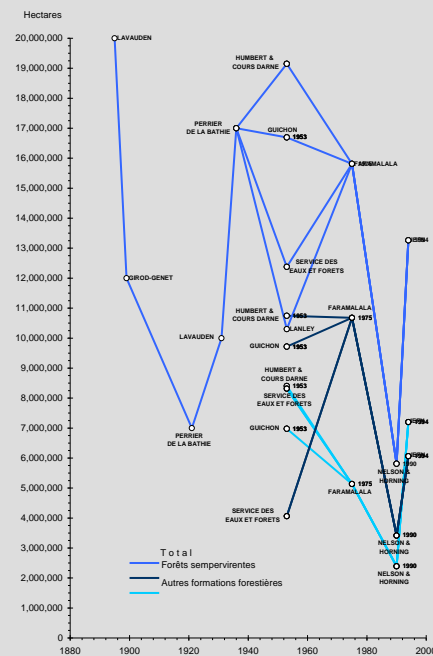
Madagascar's "environmental sector" (mid-1980s to present).

**Method:**

Two-level institutional analysis.

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# Forest Cover Estimates for Madagascar



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

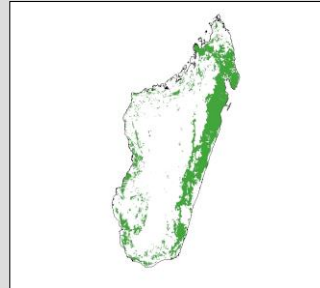
Est. 2: 1950s-2000: decrease in forest cover by +/- 40%

### 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

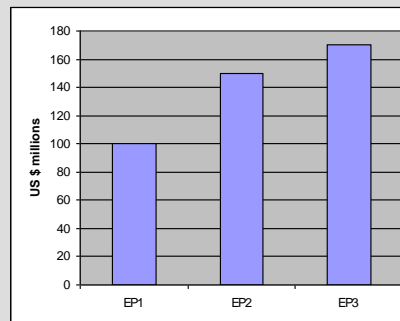
- International conventions
- National legislation  
(*code forestier*; *NRM decentralization*)
- Community-devised rules

### Conservation Institutions

NEAP  
ANGAP  
ONE  
GELOSE  
NGOs, etc.



### NEAP Funding (1991-2008)



Source: Rakotoarijaona int.. (2005)

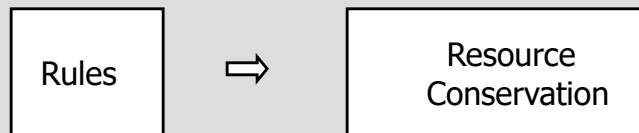
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## Deforestation: State Actors' Perspective



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## Conservation Models: Assumption 1



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## September 2003: Big Conservation News

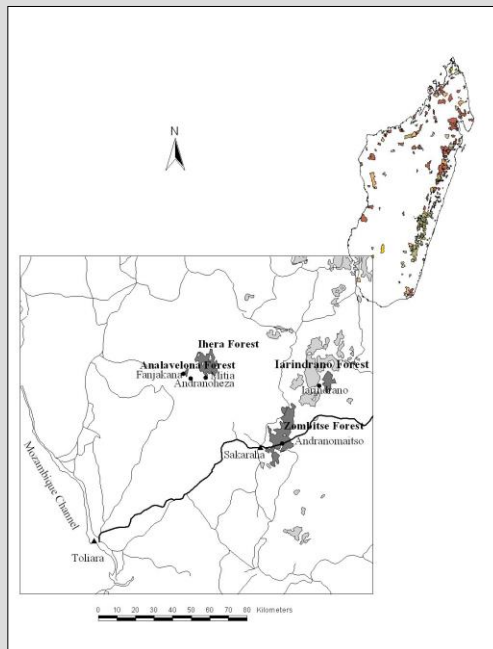
Madagascar to triple the surface of its protected areas from 1.6 million to 6 million hectares in 5 years (2004-2009)



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

President Marc Ravalomanana

Rabesahala Horning April 2008



### Evidence from Bara Land

170 individuals (men; women)

5 communities

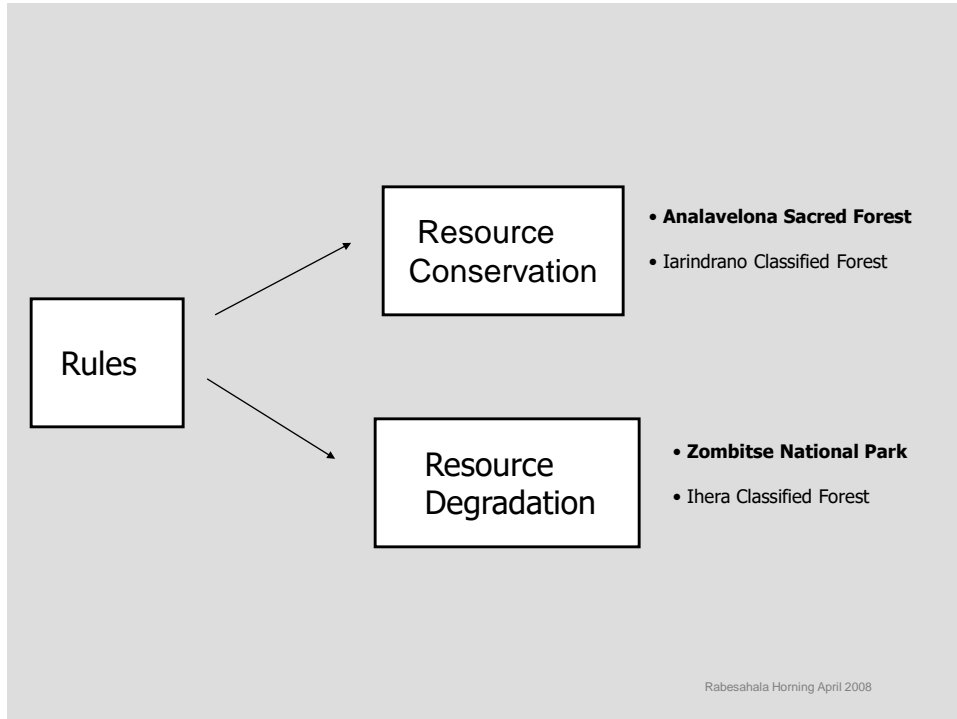
4 forests

1 national park (Zombitse)

1 sacred forest (Analavelona)

2 classified forests (Ihera; Iarindrano)

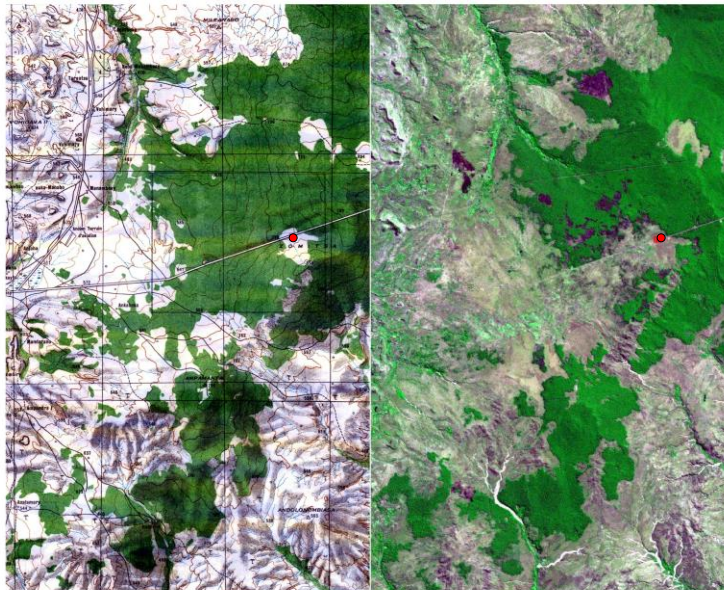
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### Zombitse National Park

1949

April 11, 1989

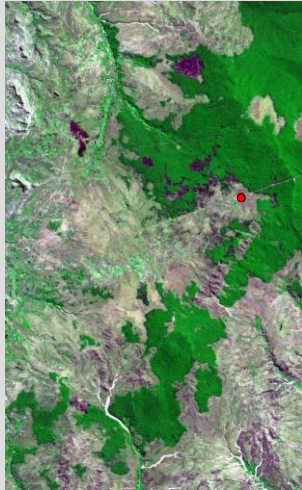


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## Zombitse National Park

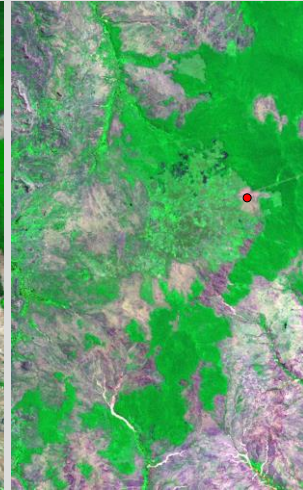
April 11, 1989



August 23, 2000



March 25, 2003



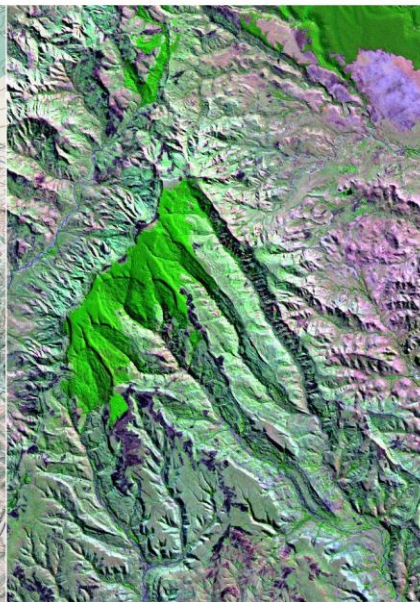
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## Analavelona Sacred Forest

1949



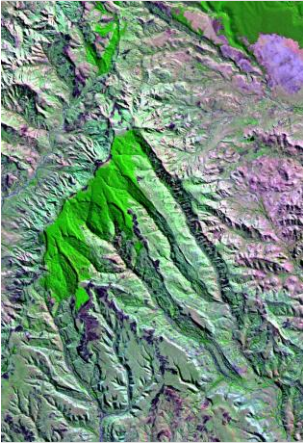
April 11, 1989



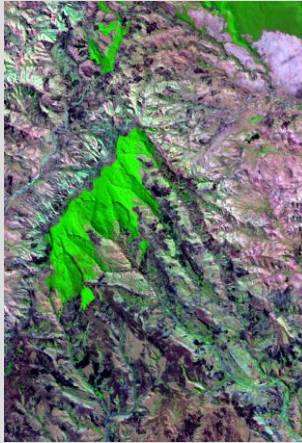
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## Analavelona Sacred Forest

April 11, 1989



August 23, 2000

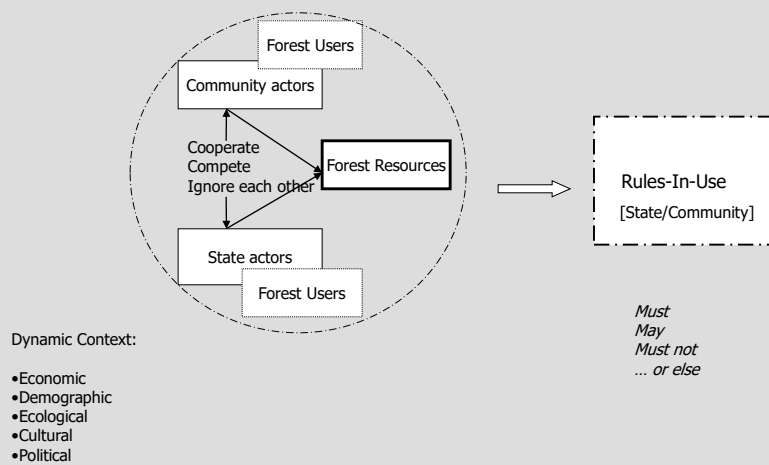


March 25, 2003



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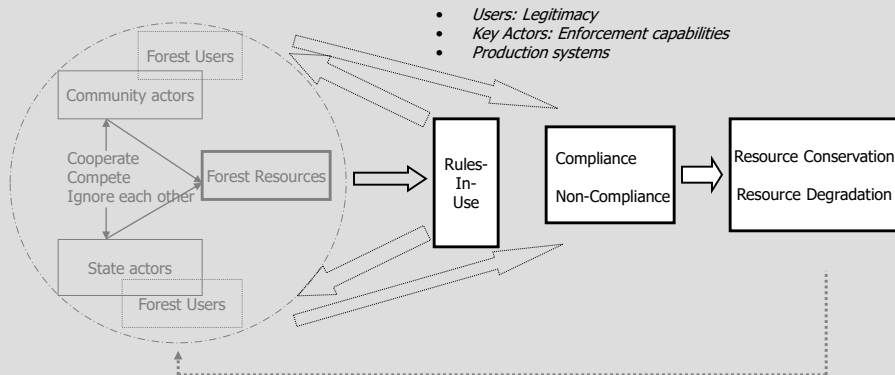
## What Rules, and Where Do They Come From?



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## The Connection between Rules and Conservation: Community Level



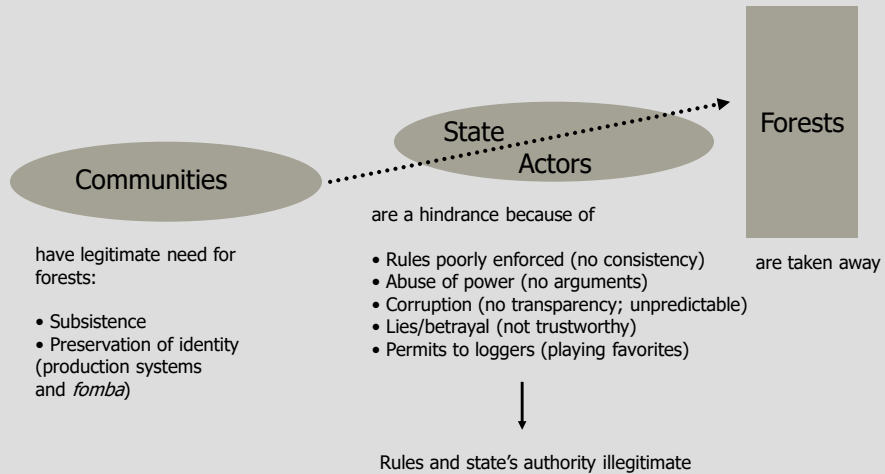
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### Conditions for Resource Conservation (RC) and Resource Degradation (RD): **Community Level**

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

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## Deforestation: Communities' Perspective



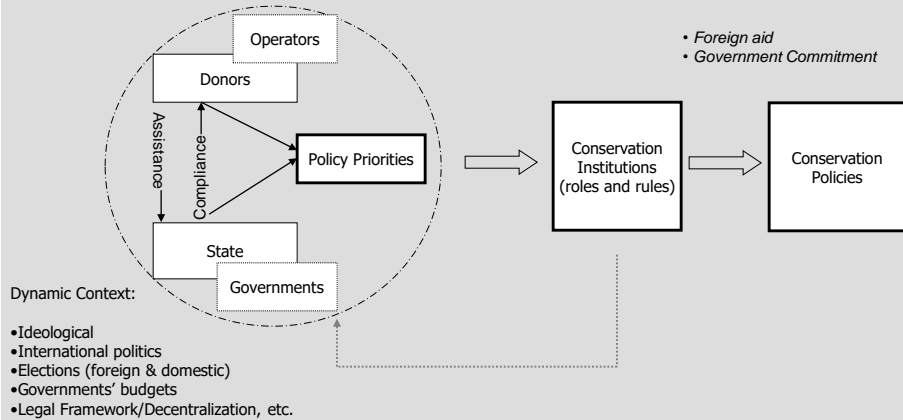
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## Conservation Models: Assumption 2



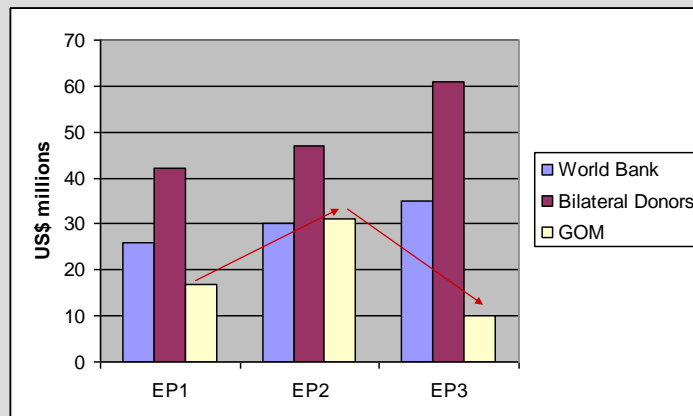
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## National-Level Politics: Madagascar's "Environmental Sector"



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## Financial Contributions to NEAP (1991–2008)



Source: World Bank (various reports)

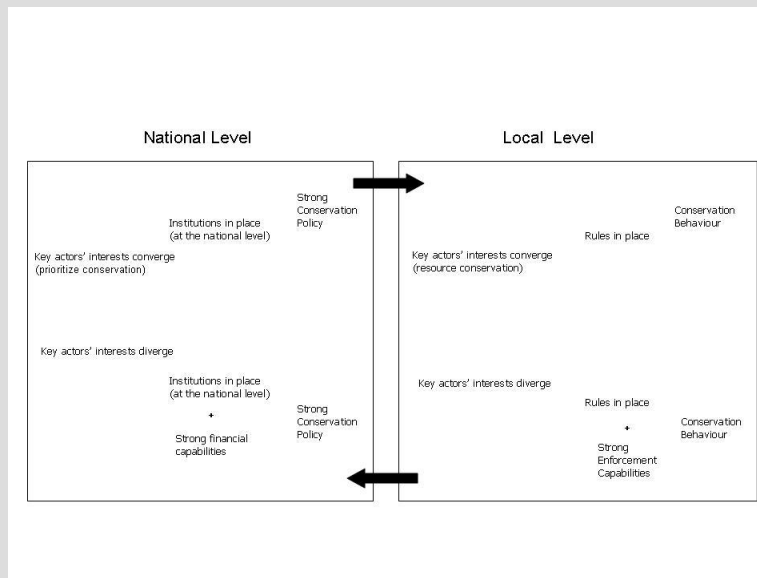
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## Conditions for Strong vs. Weak Conservation Policy Commitment: **National Level**

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

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## The Limited and Specific Conditions for Conservation



## 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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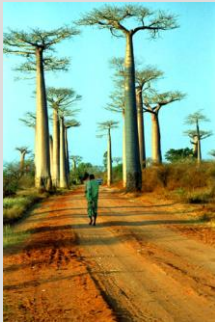




# Why It Matters

## 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