

Is conservation working for poverty reduction in Madagascar?



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“Poverty is not the lack of money it is the lack of opportunity to realize ones full potential as a human being” Amartya Sen



Quick history of conservation investment in Madagascar

Over last 25 years there has been a HUGE increase in area under conservation management

Shift away from strict protection towards community-based natural resource management



"Our natural capital is one of our greatest assets. This is why we are placing biodiversity and natural resources at the heart of our new national development plan." President Hery Rajaonarimampianina, (2014, Sydney)



1 NO POVERTY 	2 NO HUNGER 	3 GOOD HEALTH 	4 QUALITY EDUCATION 	5 GENDER EQUALITY 	6 CLEAN WATER AND SANITATION
7 RENEWABLE ENERGY 	8 GOOD JOBS AND ECONOMIC GROWTH 	9 INNOVATION AND INFRASTRUCTURE 	10 REDUCED INEQUALITIES 	11 SUSTAINABLE CITIES AND COMMUNITIES 	12 RESPONSIBLE CONSUMPTION
13 CLIMATE ACTION 	14 LIFE BELOW WATER 	15 LIFE ON LAND 	16 PEACE AND JUSTICE 	17 PARTNERSHIPS FOR THE GOALS 	 THE GLOBAL GOALS For Sustainable Development

Conservation has national benefits

Biodiversity is Madagascar's Unique Selling Point Internationally

Tourism is a significant earner:
20% total contribution to GDP*
Much is nature-based**

Significant carbon finance
(through REDD+) is expected to
flow to Madagascar



*2014 figures from World Travel & Tourism Council

** 2015 WAVES report (World Bank)

Conservation can have local benefits

The rural poor (especially the poorest) have high dependence on ecosystem services.

Some local community-based nature tourism schemes are bringing local benefits.



Conservation can have local costs

Many threats to biodiversity in Madagascar come from livelihood activities of poor, economically and politically marginally people.

Efforts to change these activities often result in local costs.





3 specific questions

- 1) What has been the net impact of Community Forest Management on economic well-being?
- 2) How can local welfare costs of conservation be best overcome?
- 3) How can impacts of conservation policies mediated through changes in Ecosystem Services be better understood and taken into account?



We are a team of many researchers from Madagascar,
UK, America, the Netherlands and Switzerland.

p4ges can paying 4 global ecosystem
services reduce poverty?
les paiements pour les services écosystémiques globaux peuvent-ils
réduire la pauvreté?
www.p4ges.org



Hydrology
team



Livelihood &
policy team



Livelihood &
institution s
team



Social-Economic team



Carbon team



Biodiversity
team



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CONSERVATION
INTERNATIONAL



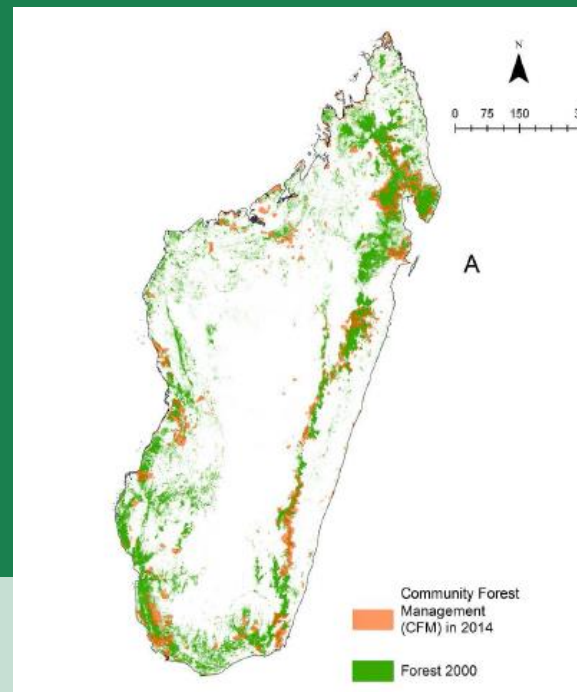
1) What has been the net impact of Community Forest Management on economic well-being in Madagascar?



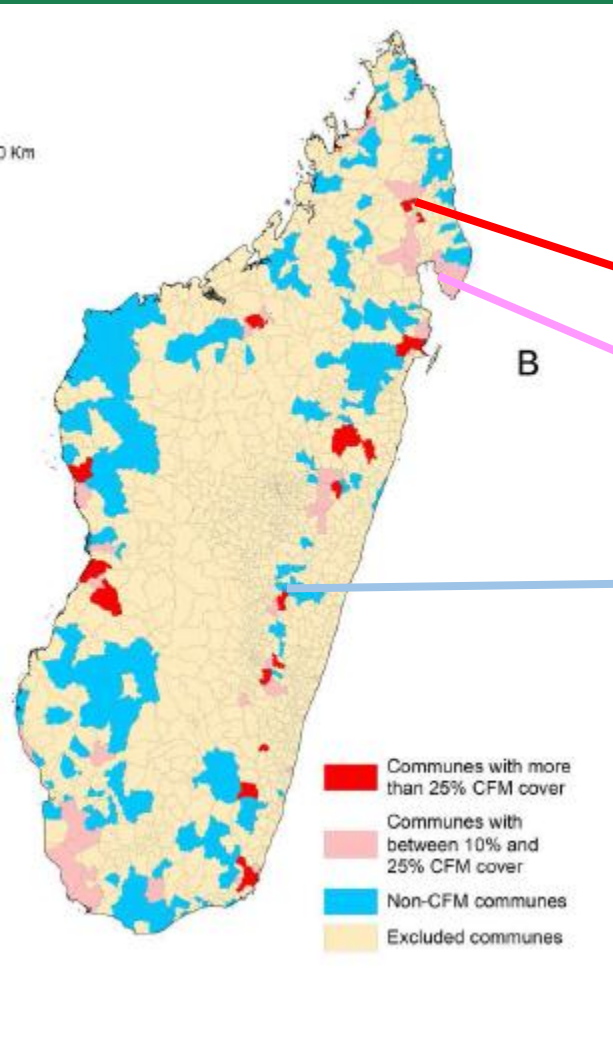
Ranaivo Rasolofoson
Bangor University/
University of
Copenhagen



By 2014 CFM covered nearly 15% of Madagascar's forests.



CFM has twin aims: conservation & improving local wellbeing



Outcome measure: Household expenditure

Intervention: those households within a commune that has 10% or more of its area covered by CFM (+ sensitivity test using a threshold of 25%)

Control: those households within a commune that has less than 1% of its area covered by CFM

Dataset: 3 national surveys (total 8671 households)

Source: Rasolofoson et al (in press)



Quasi-experimental approach: units in intervention group are “matched” with control units which are as similar as possible

Household
characteristics

Site
characteristics

Age of HH
head

Roadless
volume

Gender of HH
head

Population
density

Literacy of HH
head

Suitability for
irrigated rice

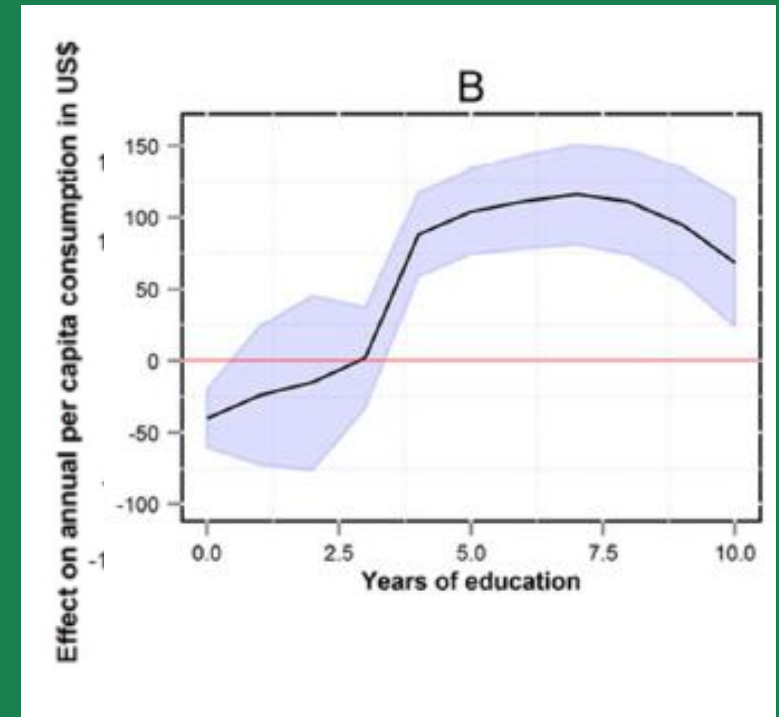
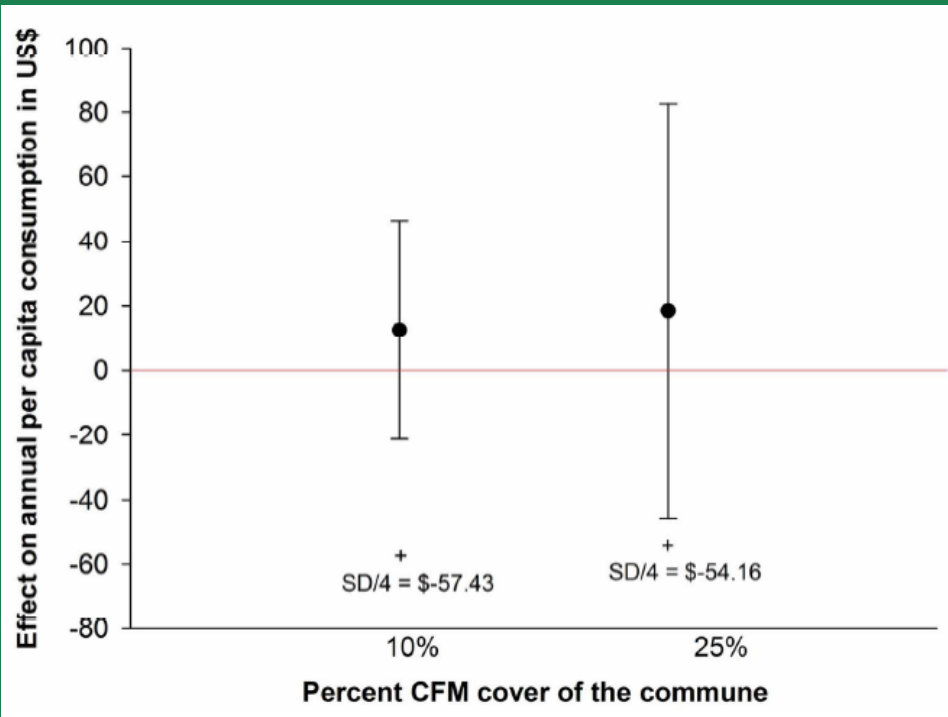
Presence of
children <5
years

Elevation



What is the impact of Community Forest Management in Madagascar on economic well-being?

- No measurable overall affect of CFM on household living standards.
- BUT impact varies with factors such as years of education.



What is the net impact of Community Forest Management on economic well-being in Madagascar? **Winners and losers**



NOTE this uses a very narrow measure of well-being/poverty

(NB it is also important to note implementation of CFM has been highly variable)

2) How can local costs of conservation be best reduced?

- It is increasingly recognised that conservation, while having global benefits, may have local welfare costs.
- We estimated the opportunity costs of the CAZ new protected area (450 choice experiments)



The median NPV of opportunity costs of conservation restrictions is >\$2500 (75% have costs greater than \$300)

This represents 10-50% of annual net local incomes

Despite social safeguards-many people's costs are uncompensated



Tenure is a major issue both for improving agricultural productivity AND for effective environmental conservation.

e.g. Mature tree fallows are important for ecosystem services supply, yet current tenure system incentivises clearance.



How can local costs of conservation be best overcome?

Focus on tenure



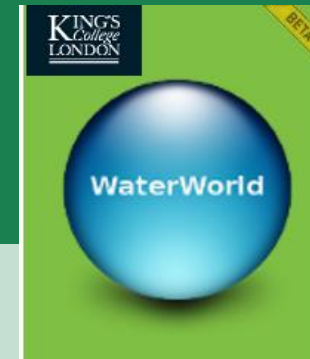
Progress is being made in local tenure but still hard for the poorest to access and individuals can't have tenure over 'forest'

"If only people have legitimate rights to own their forest patches and protect them, life will be so much easier and conflicts with recent migrants will be reduced..."
(Ampahitra commune resident, 46 years old).

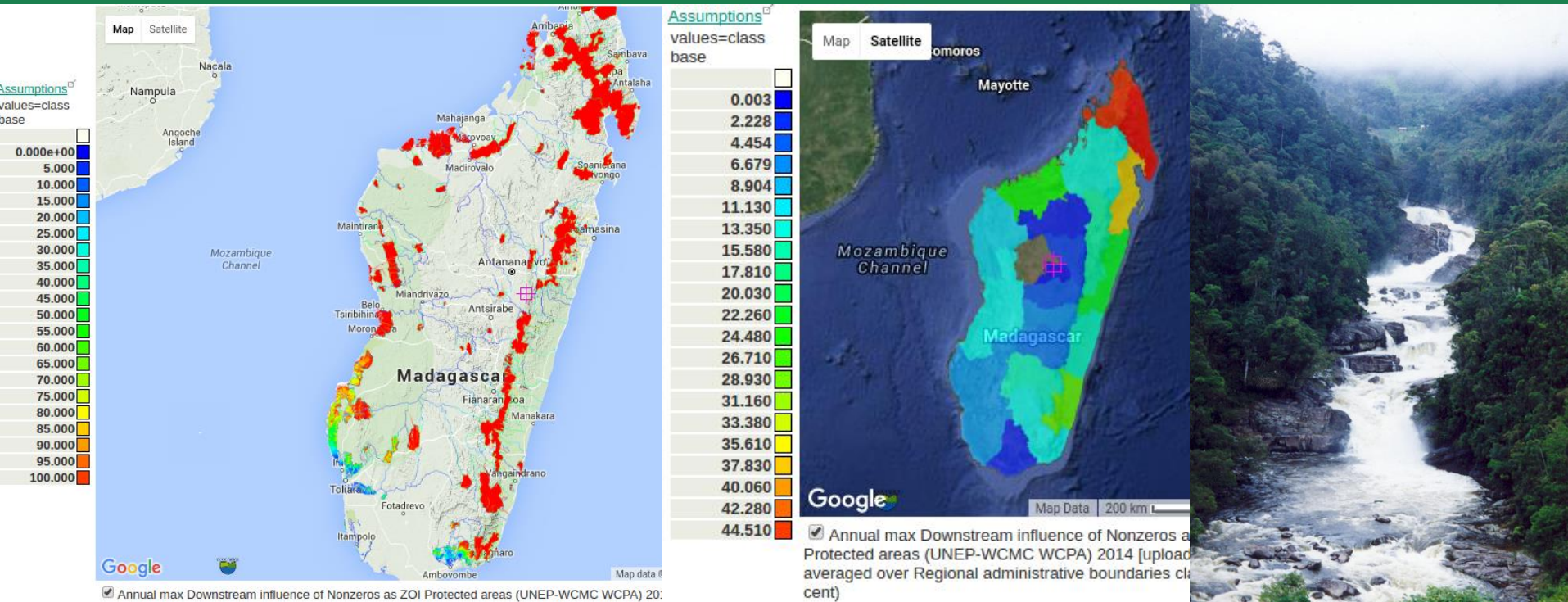
3) How can impacts of conservation policies on local beneficiaries (mediated through changes in Ecosystem Services) be better taken into account?



Improved functionality
of policy support tool
'waterworld' for
Madagascar



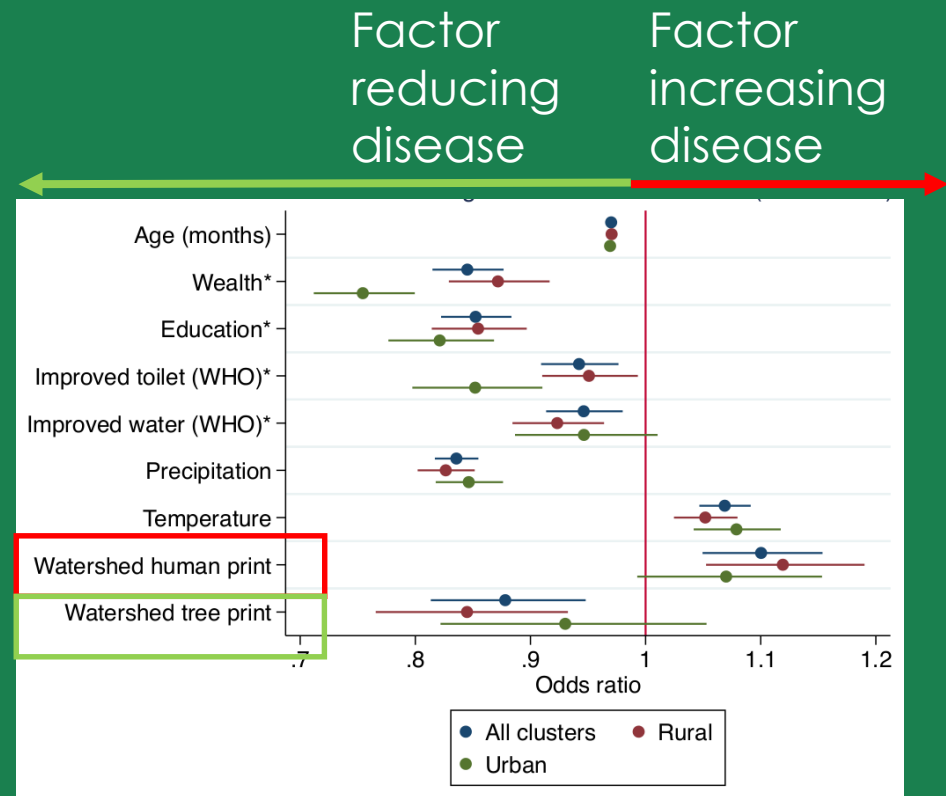
1.68m people in Madagascar receive water from PAs in the dry season (1.02m people receive >50% of their water from PAs)



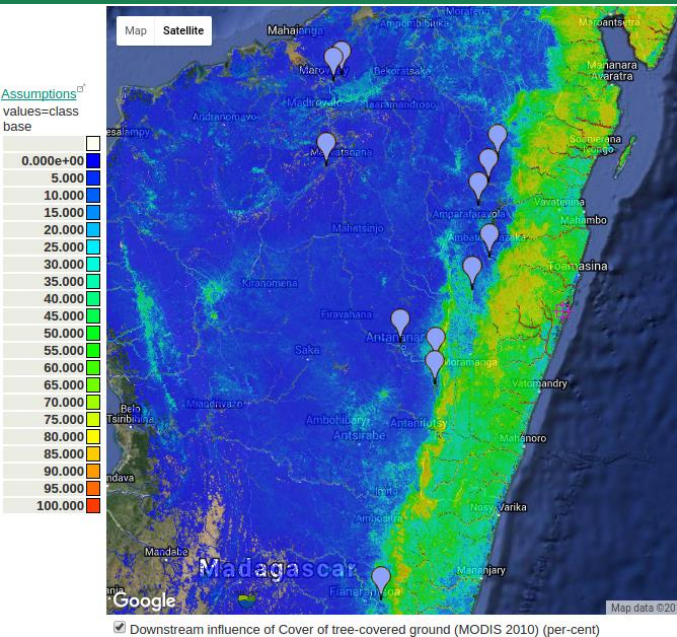
Watershed condition (Human Footprint of Water Quality and tree cover) is a strong predictor of human diarrheal disease



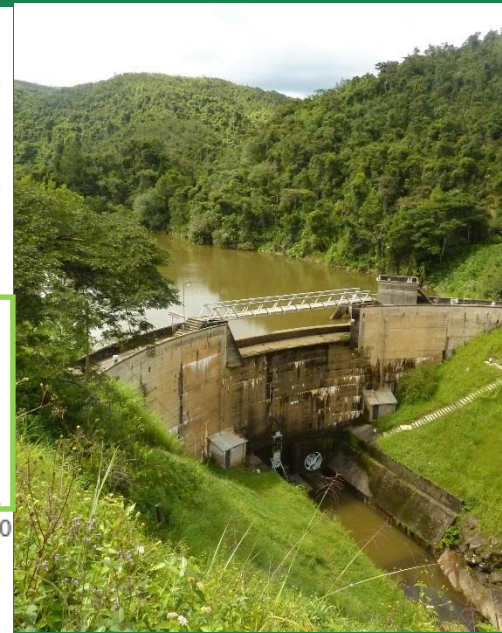
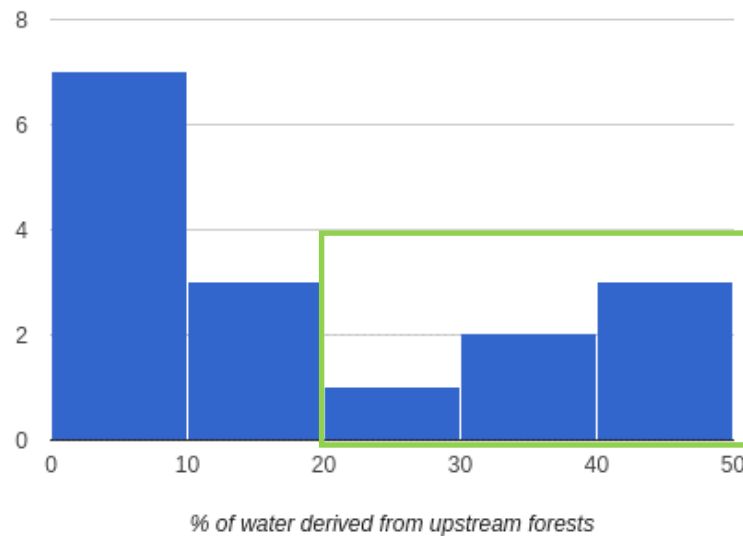
Data from 1M households in >90 countries



6 of 16 major dams in Madagascar derive >20% of their water from upstream forests



Number of dams



3) How can impacts of conservation policies on local beneficiaries (mediated through changes in Ecosystem Services) be better taken into account? **We have the tools**



Two easy-to-use policy support tools make it straightforward to investigate the effect of possible land use changes on ecosystem services (and the number of beneficiaries affected)

We can run training courses to train technicians or policy makers to use these tools

www.policysupport.org

Is conservation working for poverty reduction in Madagascar?

- Conservation policies and interventions have made some people richer and others poorer BUT lessons learnt over the last 25 years can improve this balance in future.





Thank you for listening.....

For more information see www.p4ges.org or contact
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Thanks to the lead authors and co-authors of the studies this talk is based on.....



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Photos by Julia Jones, Lyn Jones, Neal Hockley, Mahesh Poudyal, Sarobidy Rakotonarivo, Alex Rasoamanana.