

2004

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GLOBAL GOVERNANCE AND LAND USE DECISIONS IN MOZAMBIQUE

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PROLOGUE











Forbes.com



Wellwornroad.com



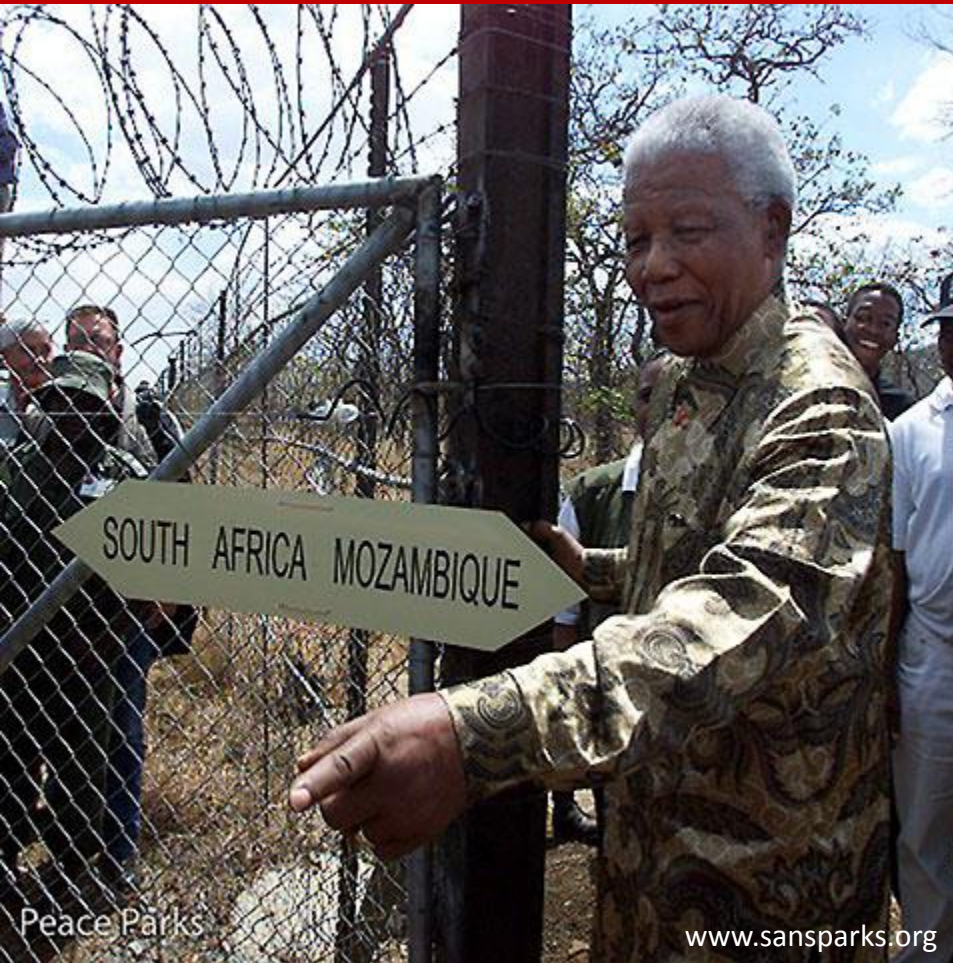
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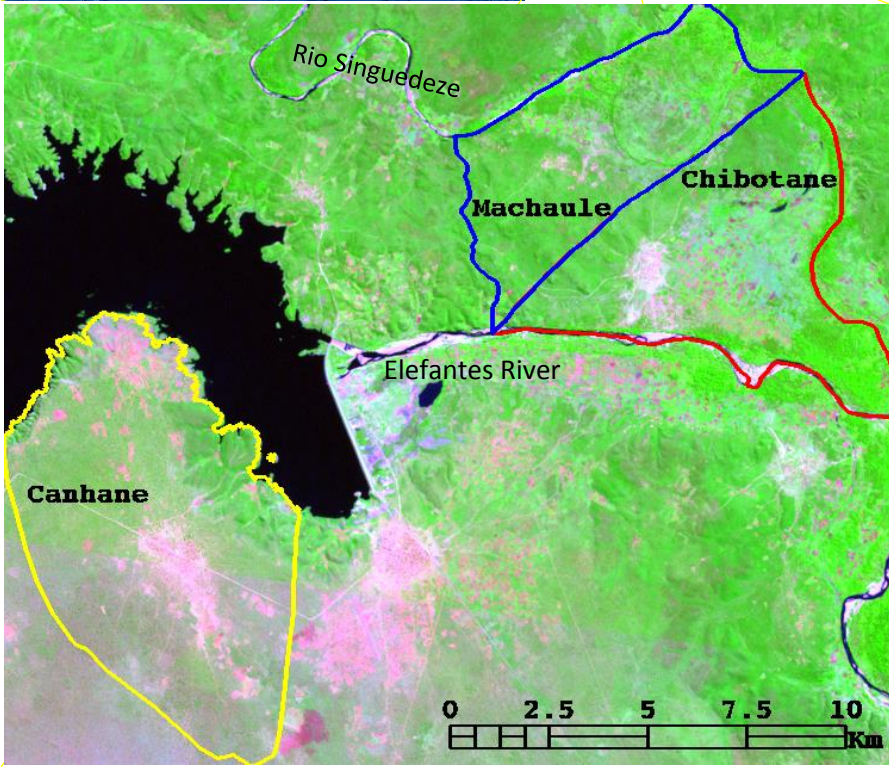
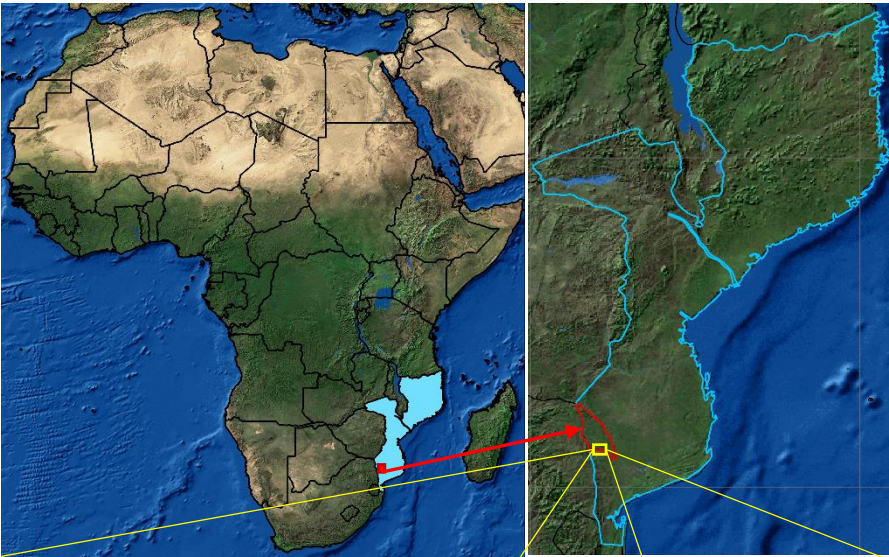


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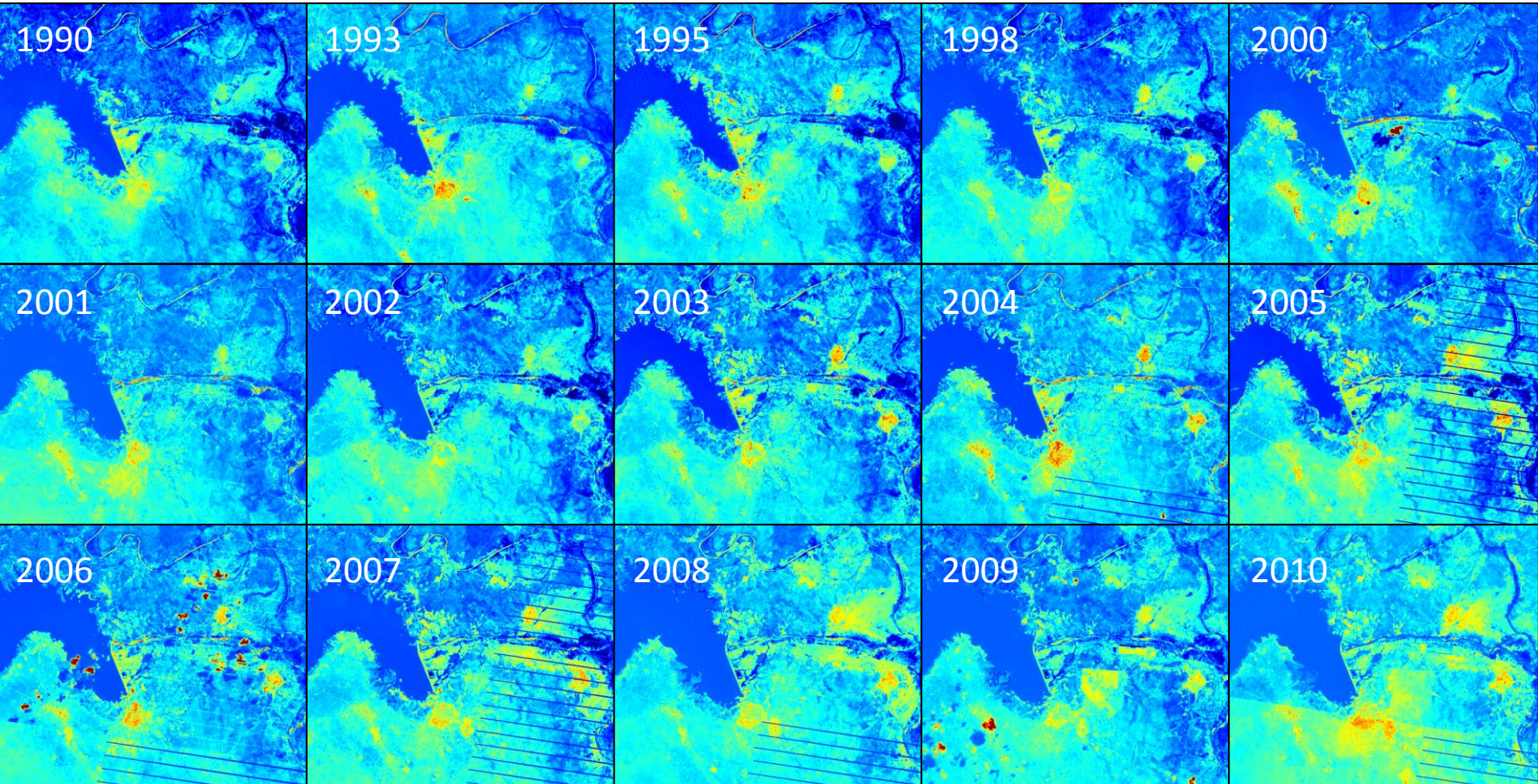
CHAPTER 1: SEE LAND CHANGE

PEOPLE AND PLACES



	Inside GLTP		Outside
	Machaule	Chibotane	Canhane
Total land area (km ²)	29.1	37.7	54.7
Total Population (2010)	424	1,304	1,416
Total Households (2010)	74	156	204
# Households Surveyed (2009)	63	140	154
# Households Interviewed (2012)	27	52	58

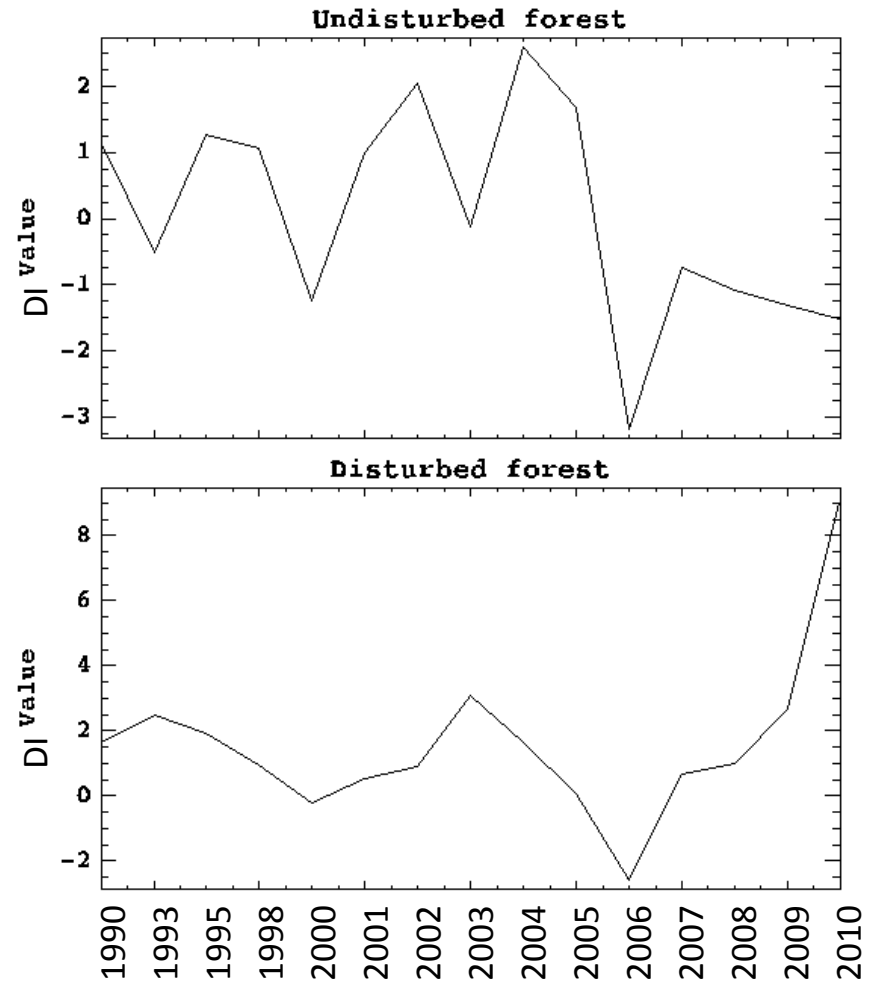
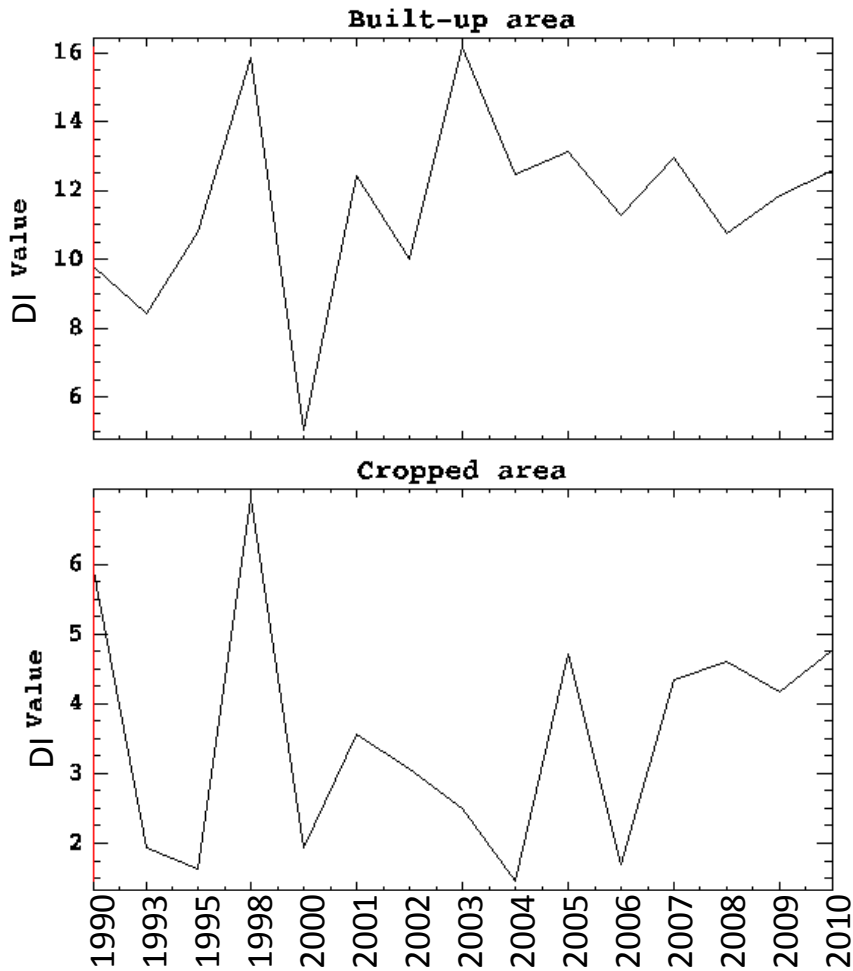
DISTURBANCE INDEX



Disturbance Index (Healy et al. 2005)



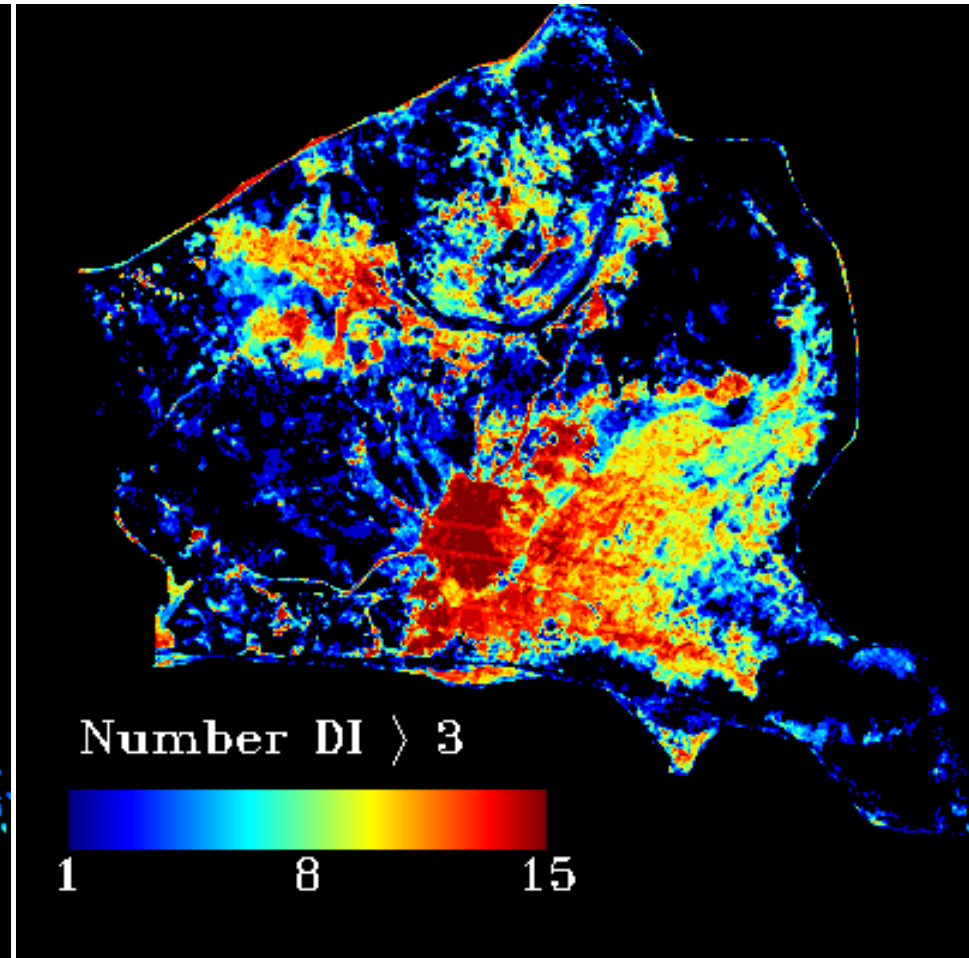
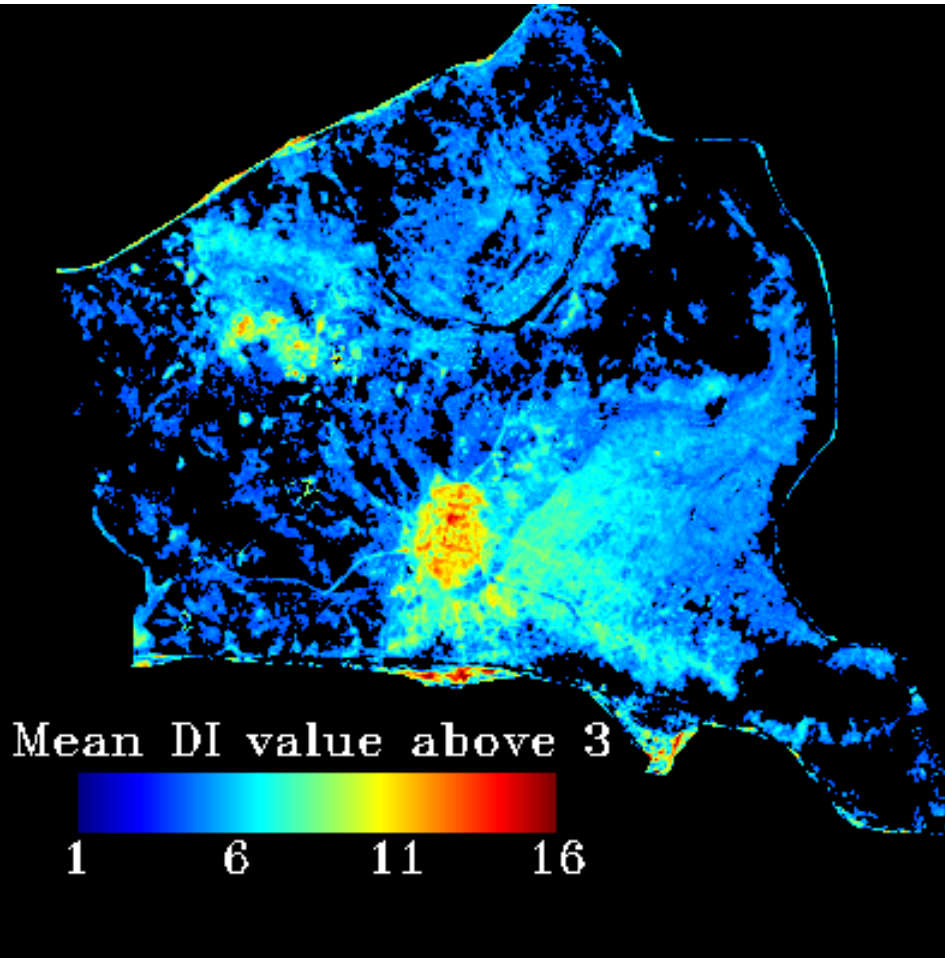
SEPARATING DISTURBANCE FROM PHENOLOGY



LOOKING FOR PERSISTENT CHANGE

Mean disturbance DI (MDDI)

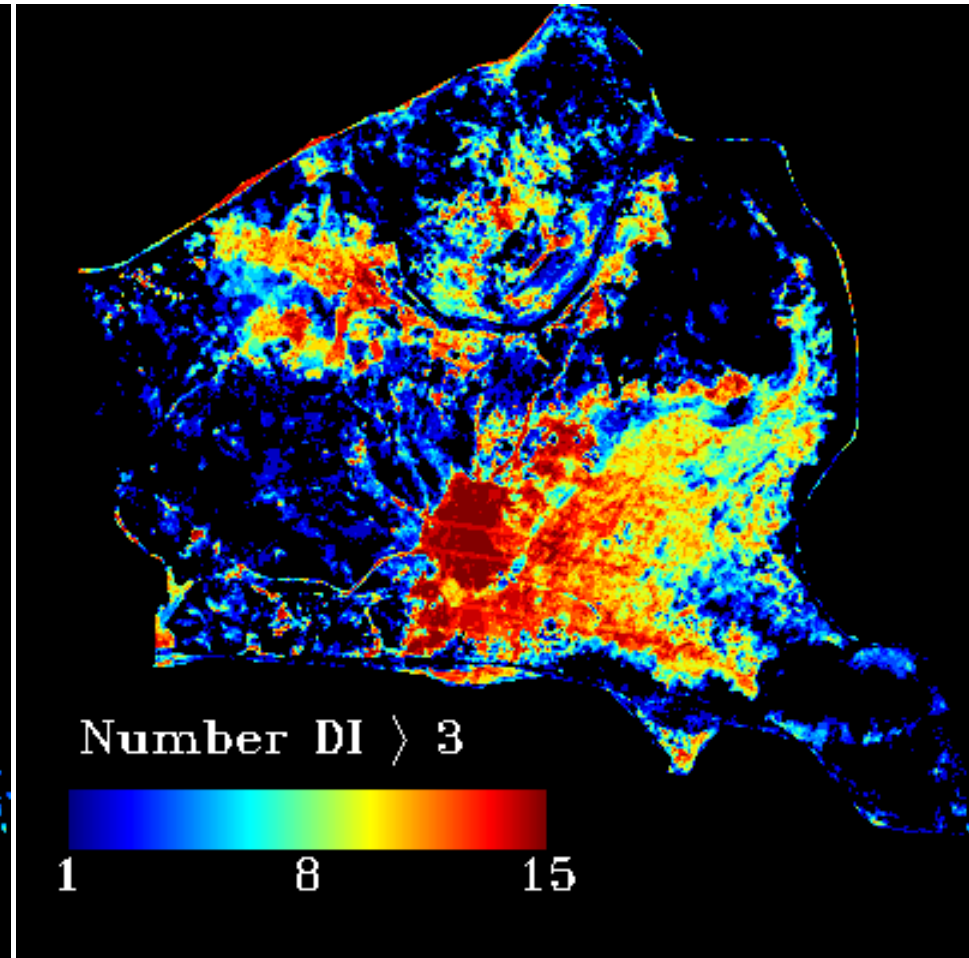
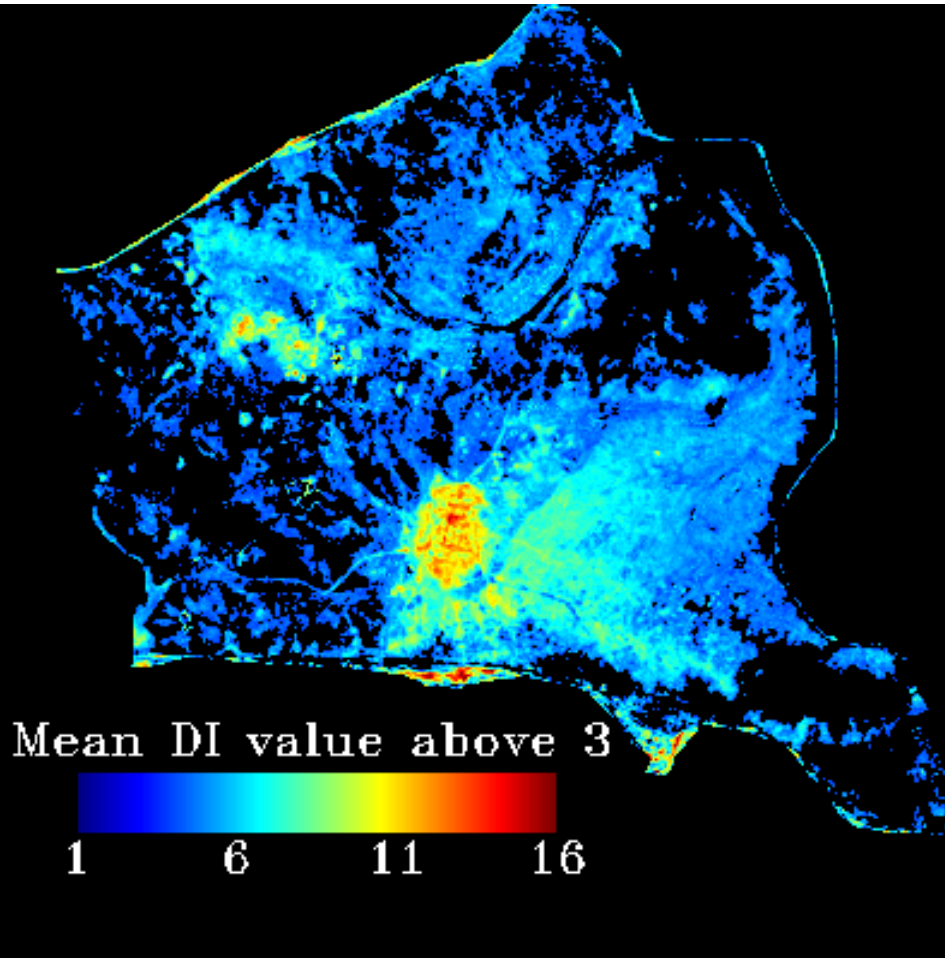
Frequency of disturbance DI (FDDI)



LOOKING FOR PERSISTENT CHANGE

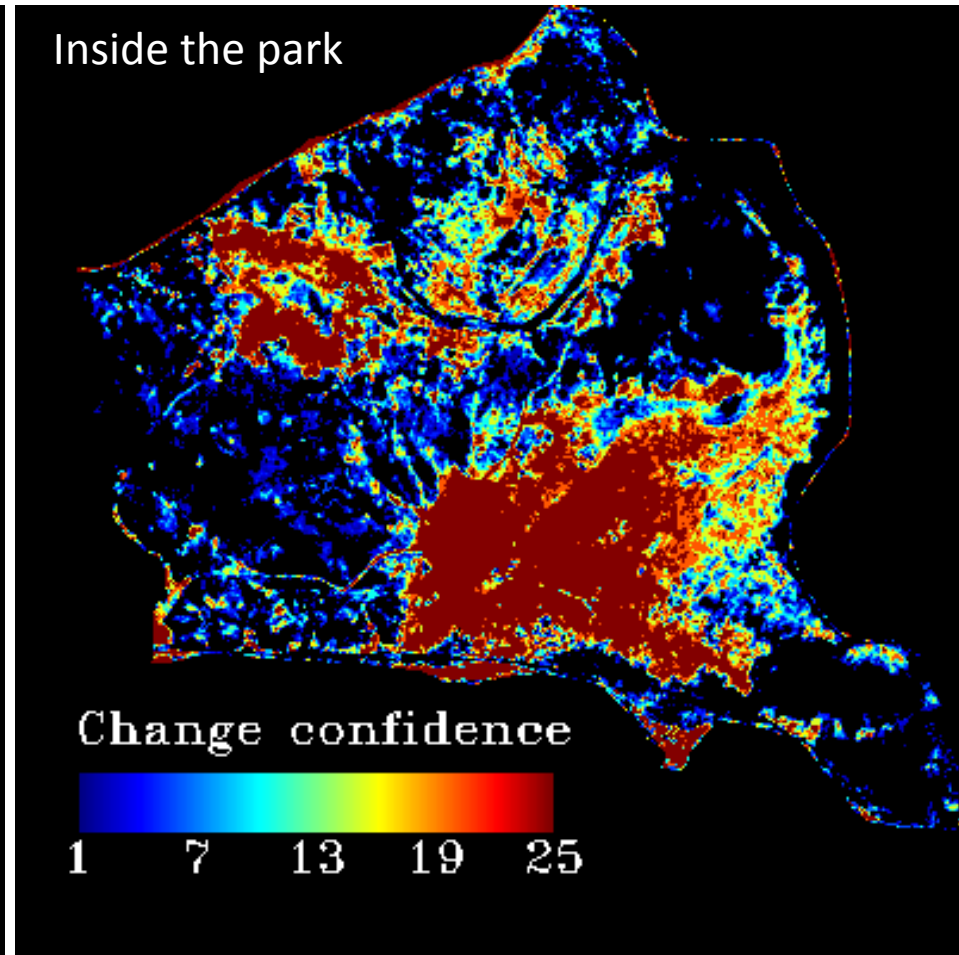
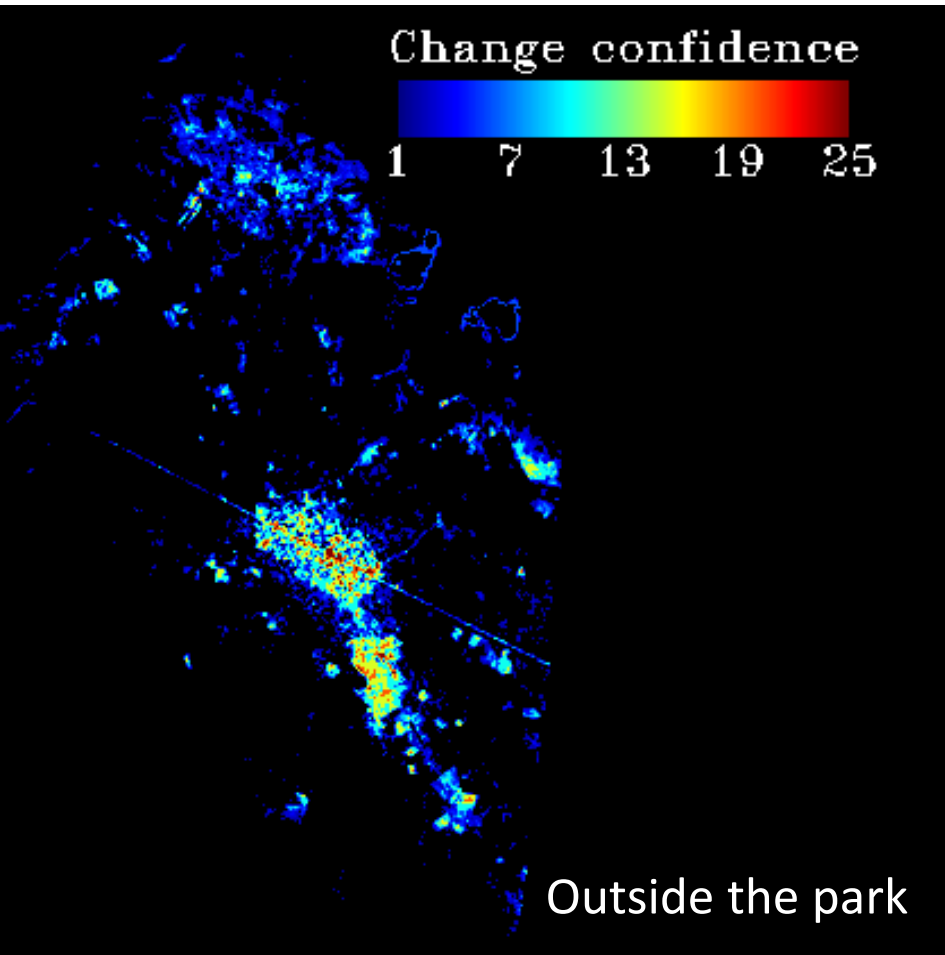
Mean disturbance DI (MDDI)

Frequency of disturbance DI (FDDI)

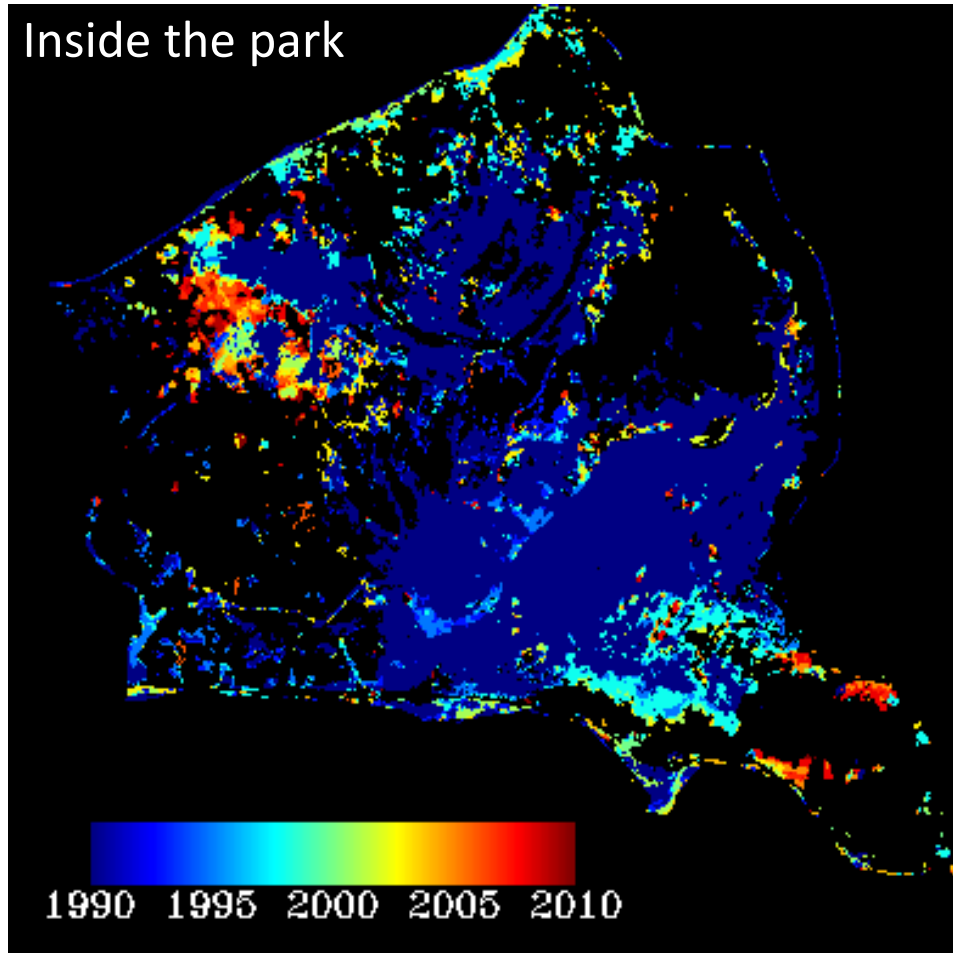
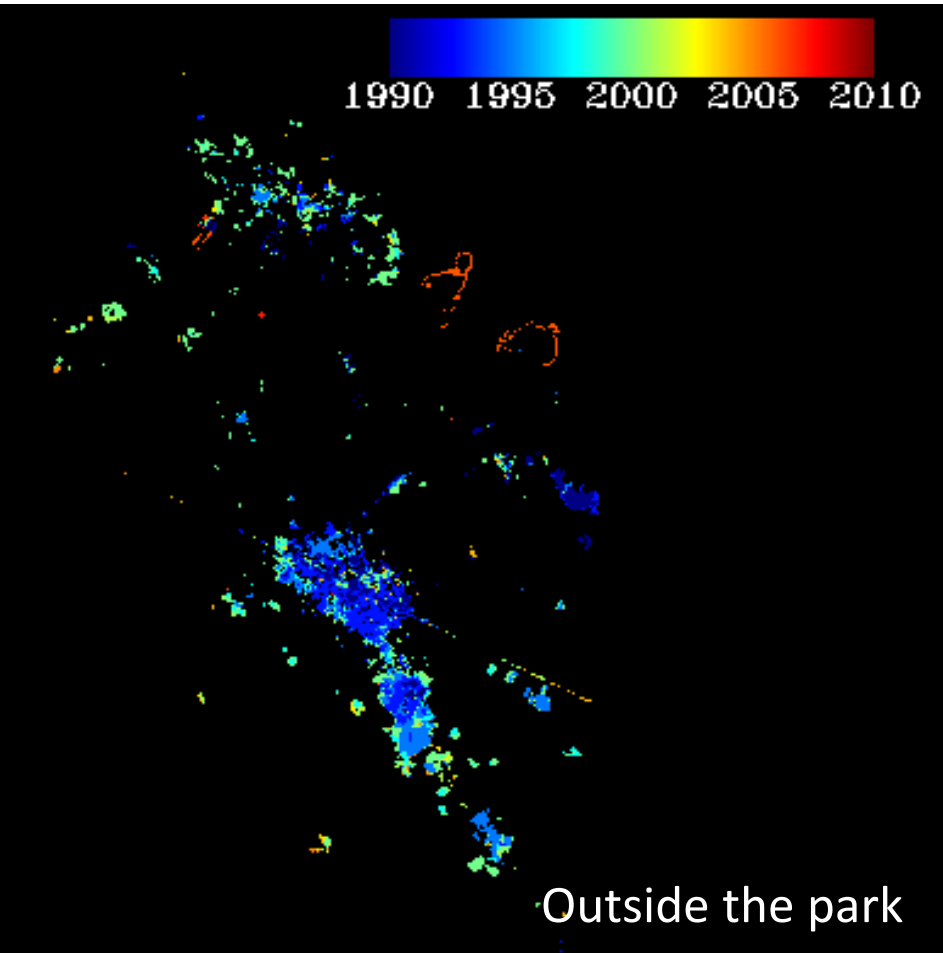


CHANGE CONFIDENCE

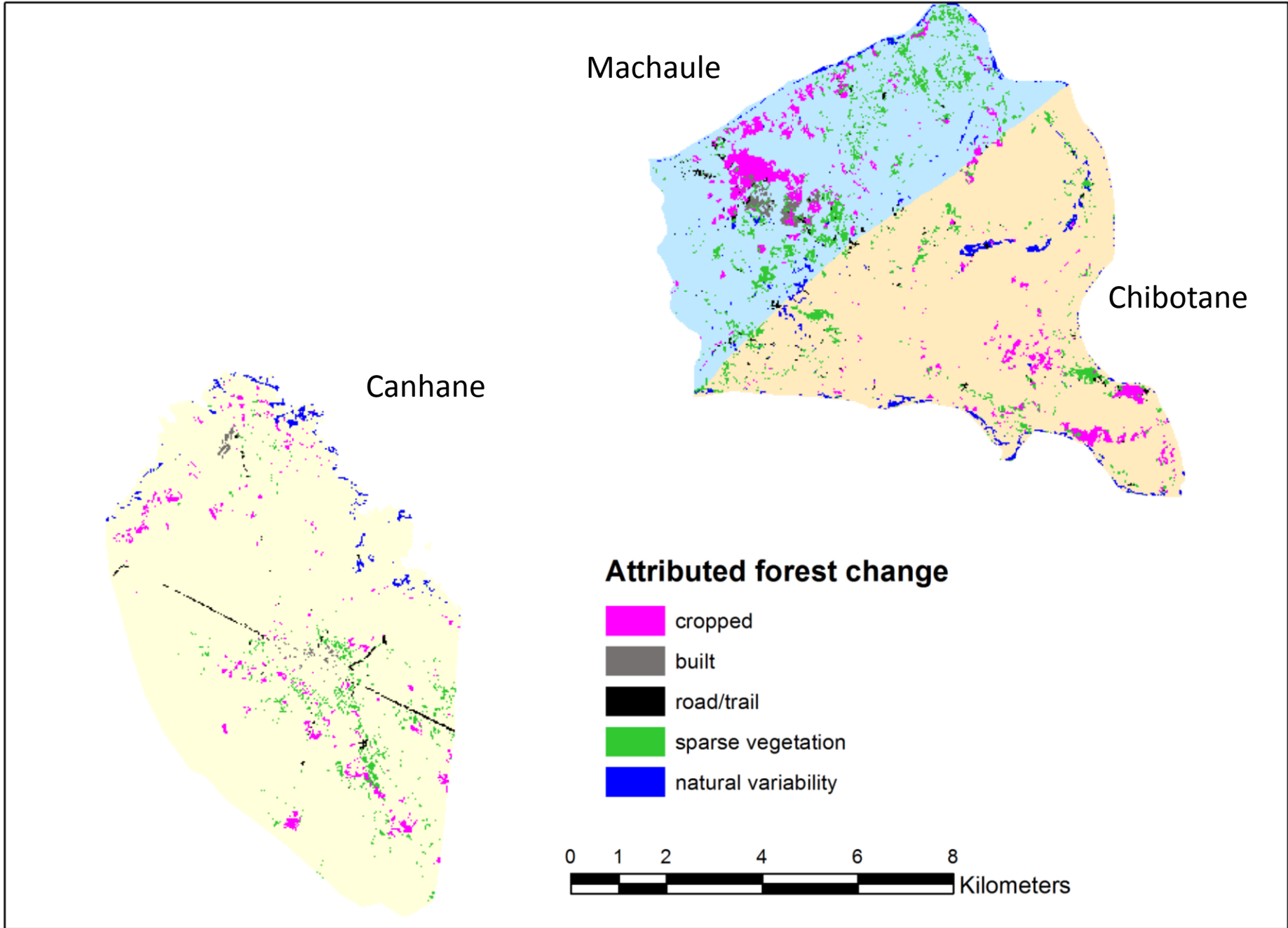
$$CC = \text{rescaled MDDI} * \text{rescaled FDDI}$$



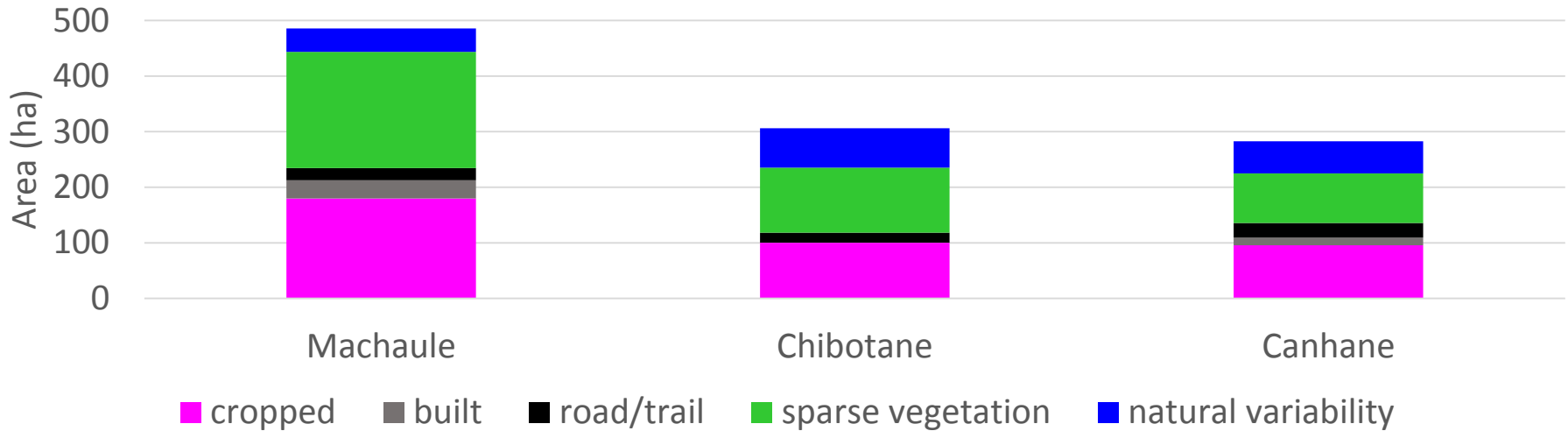
YEAR OF CONVERSION



CHAPTER 2: CHANGE? WHAT CHANGE?



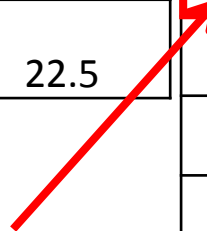
Disturbance Type



Undisturbed Forest in 2010			
	Machaule	Chibotane	Canhane
Total ha	1,579	1,465	4,583
ha/household	21.3	9.4	22.5

Disturbed Area 2001- 2010 (ha/household)			
Disturbance Type	Machaule	Chibotane	Canhane
Cropped	2.77	0.66	0.47
Built	0.50	0.00	0.07
Road/trail	0.34	0.12	0.13
Sparse Vegetation	3.22	0.77	0.44
Natural Variability	0.65	0.47	0.28

Why such a huge difference in cropland expansion ?



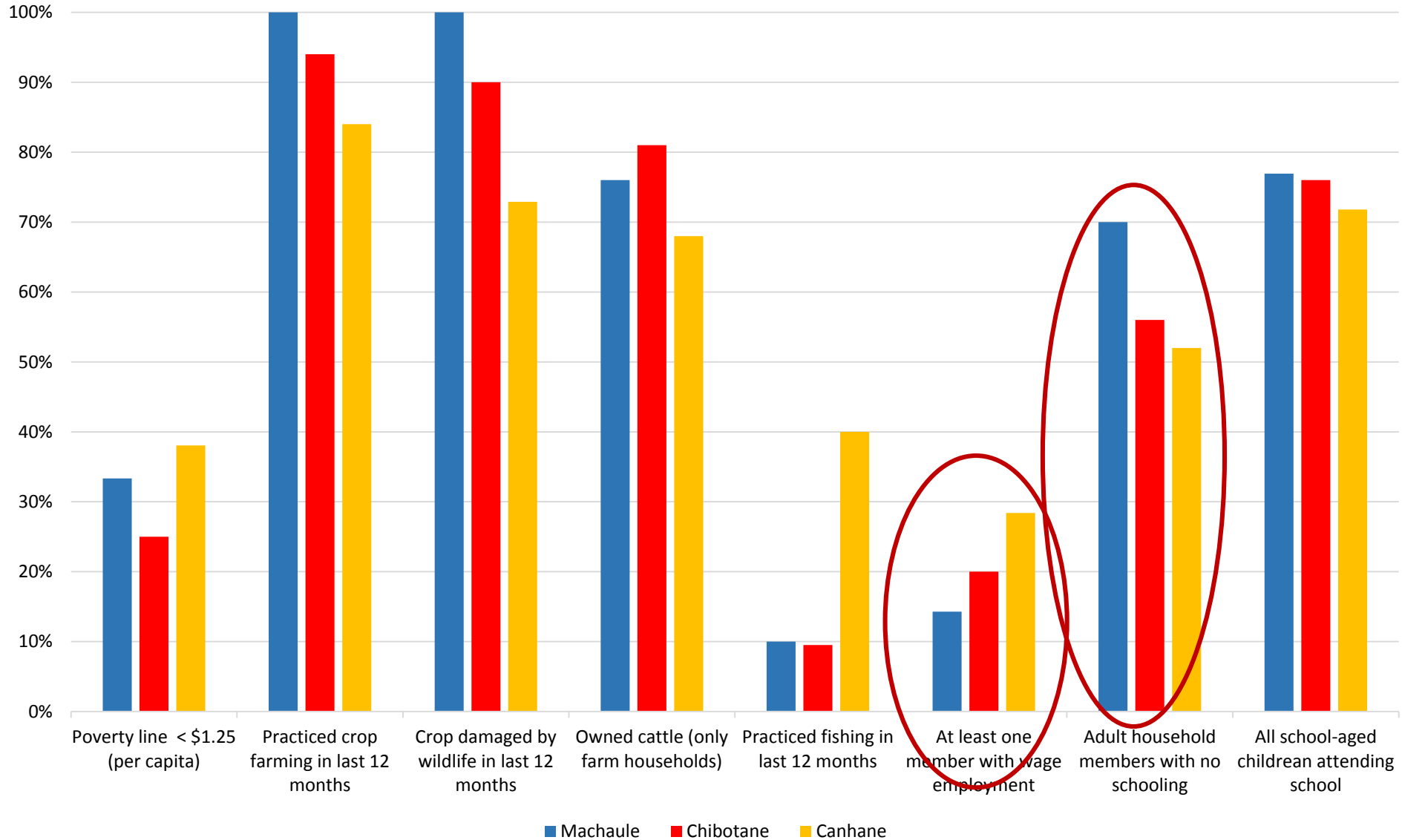
IS IT PHYSICAL ENVIRONMENT?

	Machaule	Chibotane	Canhane
Elevation (m)	29.1	37.7	54.7
Annual Precipitation (mm)	100-175	100-175	100-250
Slope Range (%)	0-7	0-7	0-8
Dominant Soil Type	Cambisols	Cambisols	Arenosols
Mean Land Area Under Cultivation (ha/hh)	3.11	3.87	3.28

IS IT ABOUT POPULATION GROWTH?

	Machaule	Chibotane	Canhane
Total Population (2010)	424	1,304	1,416
Δ Population (1997-2010)	28%	29%	21%
Total Households (2010)	74	156	204
Δ Households (1997-2010)	5.7%	-6.6%	-13.6%
Mean Household Size	5.7	8.3	6.5
Mean Length of Residency (years)	26	33	29

IS IT ABOUT SES?



CHAPTER 3: HMMM... WHY DID YOU SAY YOU WERE FARMING?

LIFE IS GOOD WHEN...

	Machaule		Chibotane		Canhane	
	Frequency	Intensity	Frequency	Intensity	Frequency	Intensity
	% respondents	% text	% respondents	% text	% respondents	% text
Adequate food	38.5	9.7	28.0	5.9	36.5	7.5
Adequate shelter	34.6	5.2	28.0	7.9	30.8	7.1
Good health	7.7	1.5	20.0	2.4	7.7	1.4
Education	69.2	19.2	48.0	17.9	44.2	10.8
Employment	92.3	33.0	86.0	38.3	82.7	34.4
Ability to farm	57.7	18.1	76.0	15.1	57.7	23.4
Ability to own livestock	46.2	8.0	20.0	10.8	50.0	12.9
Ability to hunt	11.5	3.4	4.0	0.7	7.7	1.1
Ability to prevent HWC	11.5	1.9	2.0	1.2	3.8	1.3

I FARM BECAUSE...

- **Machaule**

“There is nothing else to be done apart from cultivating the land.” QNO 052061: female, 61

- **Chibotane**

“People are respected if they follow traditions... Our ancestors cultivated.” QNO 051031: male, 54

- **Canhane**

“I want to eat without depending on anybody.” QNO 061018: male, 73

IT'S HARD TO GET A GOOD LIFE FARMING

- **Human-Wildlife Conflict**

“Since the establishment of the park in 2002, we don’t have peace here in Machaule because of wild animals. All these years from 2002 up to 2012, there is no peace.” QNO 052040: male, 39

- **Weather**

“We now believe that the global change phenomenon is really happening. The earth is changing gradually. It may not change the white soil into red soil but the changes are really happening. We have noticed that our living standard is being altered due to the changes on the earth.” QNO 061054: male, 74

- **Social Pressures**

“Women don’t want to stay with a man that only relies on the farm to sustain his family... She will leave him.” QNO 061082: male, 34

WHAT'S THE ALTERNATIVE?

- **Machaule**

“What I would like to say is that we should have good and profitable ideas. If hunger comes, we should know what to do apart from stealing to get food. This is what I want God to give me. I just pray to God to give me these ideas.” QNO 052039: male, 41

- **Chibotane**

“Our ideas nowadays lead to more development but our grandparents were even afraid of building a house... We are now clever.” QNO 051051: male, 39

- **Canhane**

“For a person to have a good life that person must work [off the farm]. When a person works this is what gives him ideas to change his life.” QNO 061061: male, 34

WHAT'S THE WAY OUT?

- **Machaule**
- “The problem here in this zone [community] is there is no one who has gotten a loan. We learn things by imitating what others are doing. There is no one here to learn from.” QNO 052018: female, 38
- **Chibotane**
- “I was taught [to sell shawls] by my friends that were also running those kinds of businesses. When I learnt it, I retained it... I copied them.” QNO 051050: female, 36
- **Canhane**
- “The way of making life to be better is to wake up in the morning and see what other people are doing. That is the way of making life easy.” QNO 061024: male, 74

WHAT CAN I DO?

- **Machaule**
- “Even if [the park] irritates us, we have gotten used to the situation already and there is nothing we can do.” QNO 052005: female, 49
- “We just suffer and there isn’t any other way.” QNO 052045: male, 51
- **Chibotane**
- “There are many poor people in this community and we are not getting anything [from the park]. We complain about it a lot.” QNO 051141: male, 72
- **Canhane**
- “You should think for yourself... I think for myself. If a job comes I can stop farming and go to work so that I can get money.” QNO 061099: female, 53

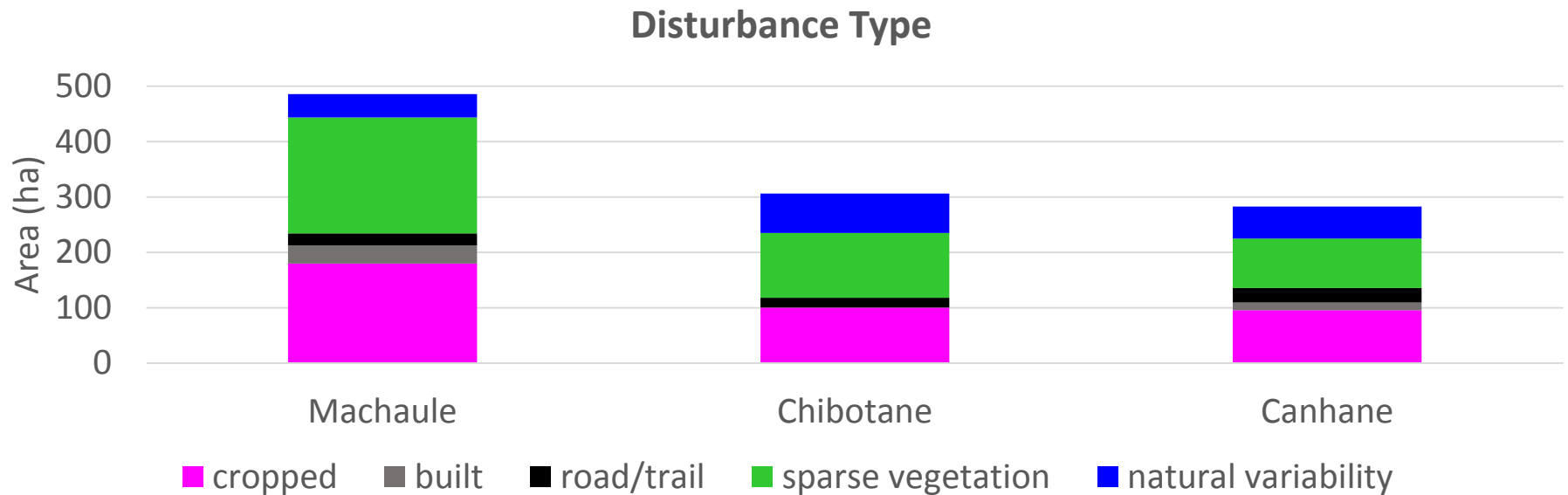
THE CAPACITY TO ASPIRE

1. The ability to form conjectures and expectations about the future
2. The ability to articulate what you would like to achieve
3. The ability to envision a plan to achieve your goals

“In strengthening the capacity to aspire... , especially among the poor, the future-oriented logic of development could find a natural ally, and the poor could find resources required to contest and alter the conditions of their own poverty.”

Appadurai, 2004: 59

AND SO IN ACCORDANCE WITH THEORY...



Disturbed Area 2001- 2010 (ha/household)			
Disturbance Type	Machaule	Chibotane	Canhane
Cropped	2.77	0.66	0.47

CHAPTER 4: BUT THAT IS NOT ALL...

JUST LOOK WHAT THEY DID TO THE FOREST IN MACHAULE!



AND LOOK AT WHAT THEY DID IN CHIBOTANE...



photography4life.org



TREES VS RHINOS?

- **Machaule**

“I don’t know why we do not hunt rhinos here. Maybe we are scared. Our conditions are different from those people [poachers] from [the other community]. Those people have better conditions.” QNO 052001: male, 53

- **Chibotane**

“With just a single [rhino] horn you can develop.” QNO 051028: female, 31

- **Canhane**

“In my point of view here in Massingir there are 45% of people who make a living [poaching rhinos]. The people who have money are the ones who are practicing that activity. They are the ones who eat in restaurants, who buy things in big shops, who buy food, seeds, cement and corrugated iron sheets and this shows that it is part of development.” QNO 061001: male, 22

EPILOGUE

GLOBAL GOVERNANCE AND LAND USE DECISIONS

- Continue the sentence:
 - If you build it they will ...
- Will they though???
- Can they???
- Do they have the capacity???



ASPIRATIONS AND LCLUC

- A new theoretical underpinning of human drivers of LCLUC
 - More limited capacity to aspire ∞ more forest clearing
 - Farming is seen as the “no-choice” option locking people into multidimensional poverty and potentially unsustainable land use patterns
 - Stronger capacity to aspire ∞ less forest clearing
 - Higher levels of aspirations coupled with limited alternatives also leaves an imprint on both physical and social landscapes
 - Potential species extinction
 - Violent policing of the poor

THANK YOU