

# Evidence from ongoing urban land titling research in Dar es Salaam

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&

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# 1. Motivation

“Leaders of the Third World and former communist nations need not wander the world’s foreign ministries and international financial institutions seeking their fortune. In the midst of their own poorest neighbourhoods and shanty towns there are - **if not acres of diamonds - trillions of dollars**, all ready to be put to use if only we can unravel the mystery of how assets are transformed into live capital.”

- Hernando de Soto, *The Mystery of Capital*

## Insert title here?

Most economists see formal and secure property rights as crucial to economic development and poverty reduction

- Protecting the poor from unwarranted expropriation
- Reducing expropriation risk can increase investment incentives
- Formal property as collateral to get access to credit
- Formalisation clarifies ownership, and eases (?) transferability
- Freeing up land markets to allow for efficient distribution of land

Tenure formalisation also should create benefits for governments:

- Maintenance of urban planning standards & limits informal growth
- Creates revenue base for infrastructure investment

# Insert title here?

Importance of formal property rights is embraced by most governments, policymakers around the world

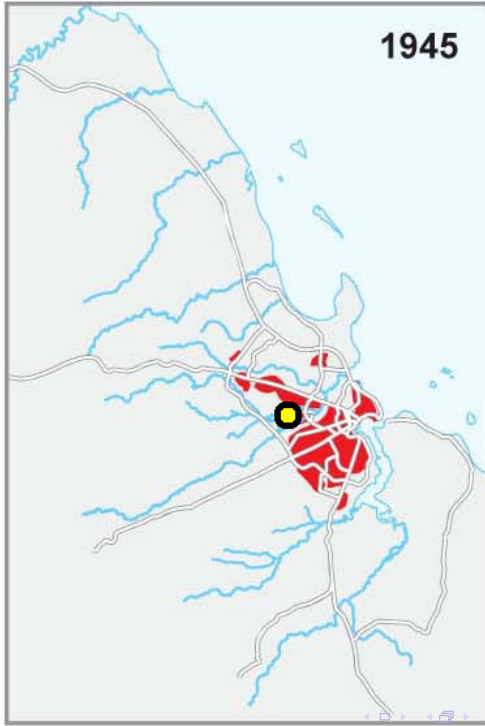
- Most African governments have some sort of urban or rural titling initiative
- David Cameron's 'golden thread' of development, USAID, World Bank, UNDP/UN-Habitat, etc.
- Tanzania: MKURABITA, land registry, village demarcation

## Mixed evidence on the benefits of titling

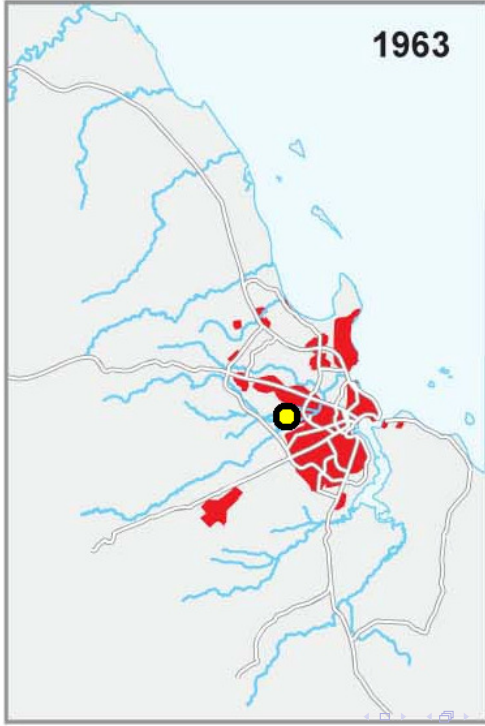
1. Some evidence from natural experiments that land titling reduces (perceived?) expropriation risk, induces households to invest more - Galiani (2010) in Argentina, Field (2007) in Peru.
2. Limited evidence that it leads to an increased in access to credit, Field (2006) and Dower (2012) in Indonesia.
3. Some evidence on house prices - Lanjouw and Levy (2002)

Evidence seems to be context (and title!) specific - hence the need for more Tanzania-based research.

1945

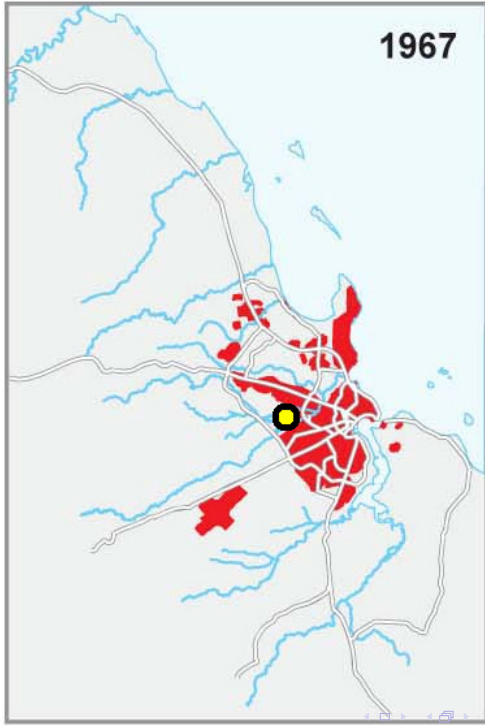


1963

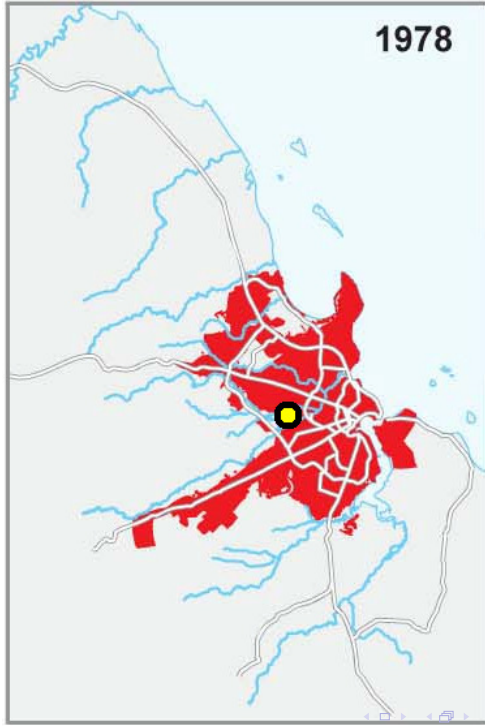




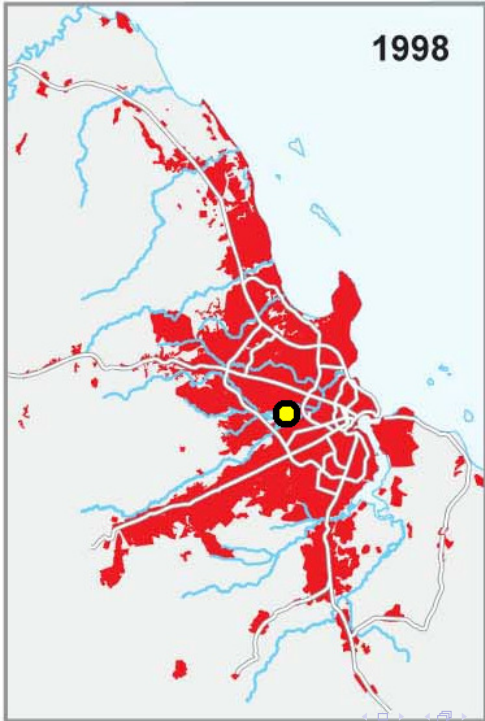
1967



1978



1998



# Land tenure in urban Tanzania

- Tanzania currently trying to make this difficult transition from informal to formal urban tenure: over 80% of land in Dar es Salaam is informally held.
- In 1999 the **Land Act** began to recognize informal landholding in urban areas - gave the central government a mandate to push these settlements to formalise.
- Two main instruments were established for urban areas:
  1. **Residential license** a short term, limited form of leasehold (2-5 years renewable)
  2. **Certificate of right of occupancy** long term, 33-99 year leasehold, a closer to what we would consider a 'land title'. Requires cadastral survey.

# Today's agenda

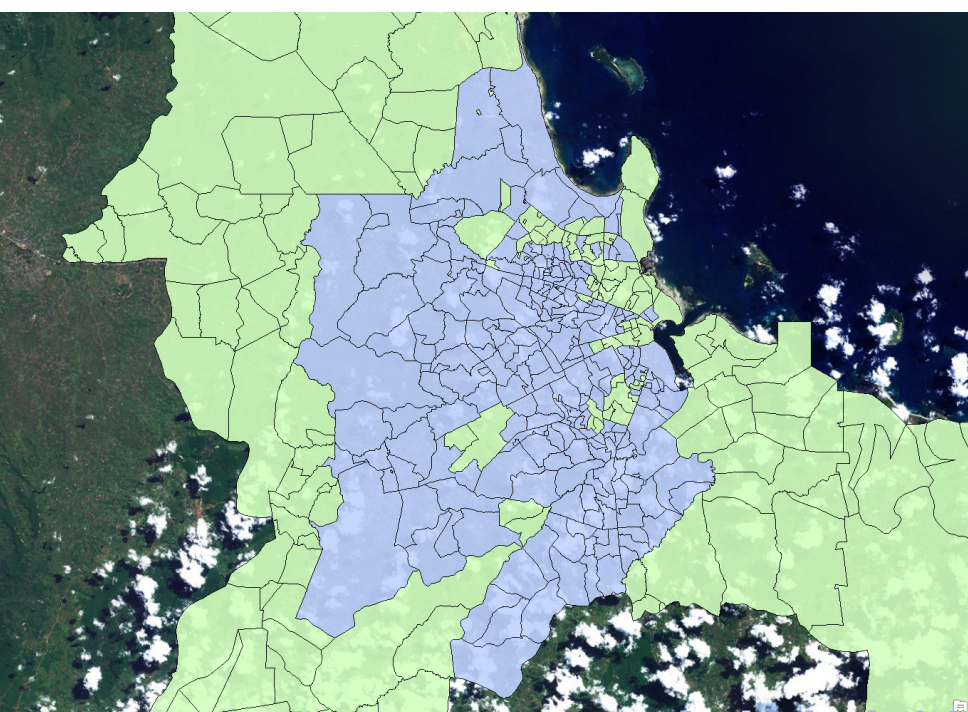
1. Ongoing evaluation of the impact of residential licenses (RL)
2. Research project on the impact of Certificates of Right of Occupancy (CROS)
3. Early results from the CRO project on take-up, gender results, infrastructure and neighbour effects
4. Some lessons to take away from these results as well as our experience doing research

## 2. RL Impacts

# Analyzing the impacts of residential licenses

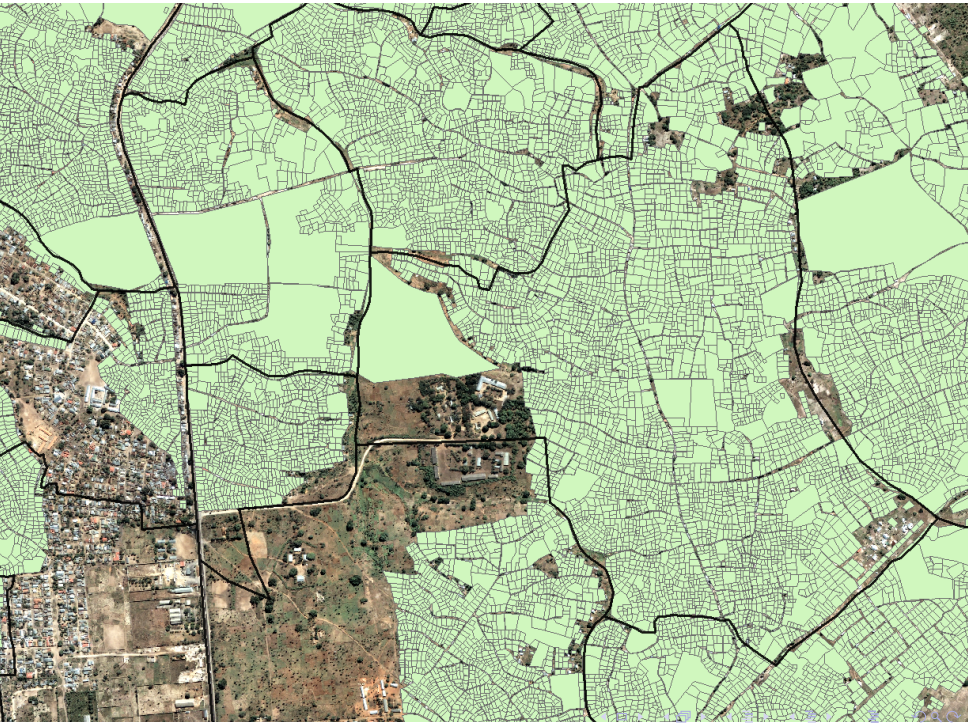
Phase One of the residential license programme commenced in 2004/05

- First: massive land registration exercise, using aerial photography and surveying to map out ownership.
- Land registries established in Kinnodoni, Illala and Temeke
- Only parcels included in the registry were allowed to apply for a residential license

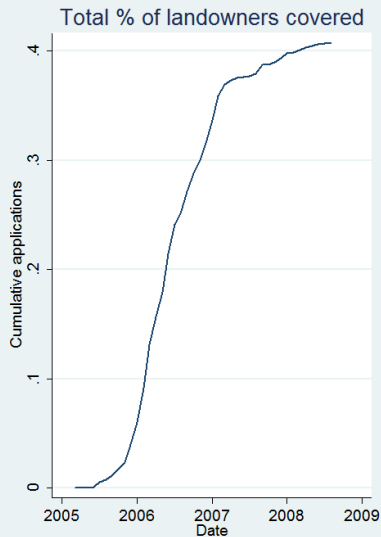
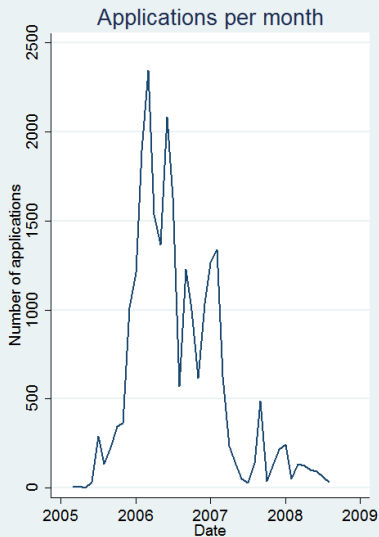






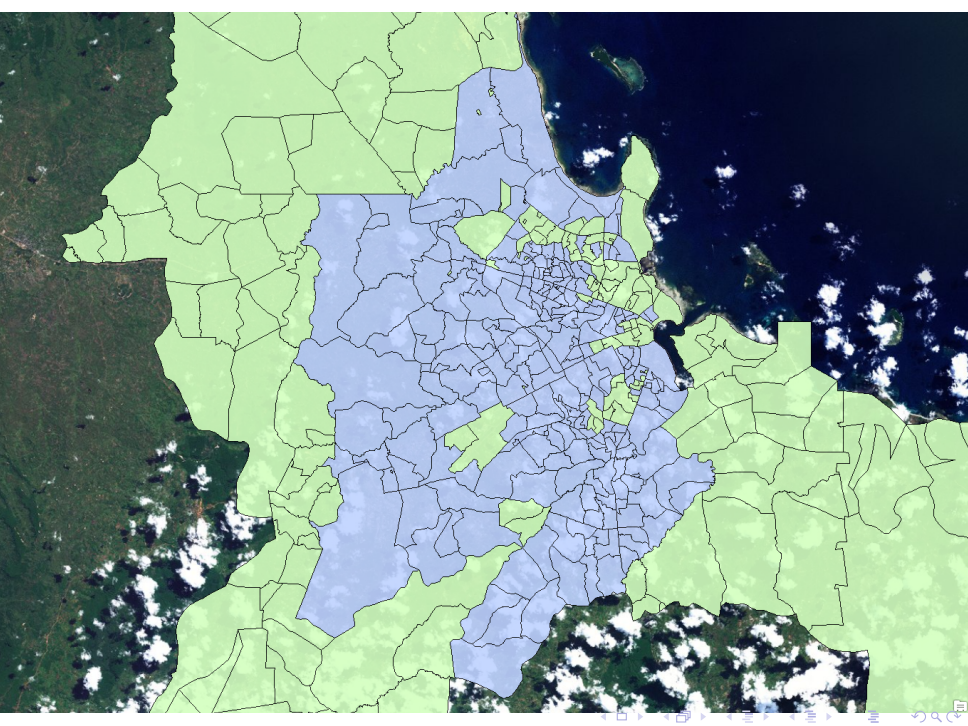


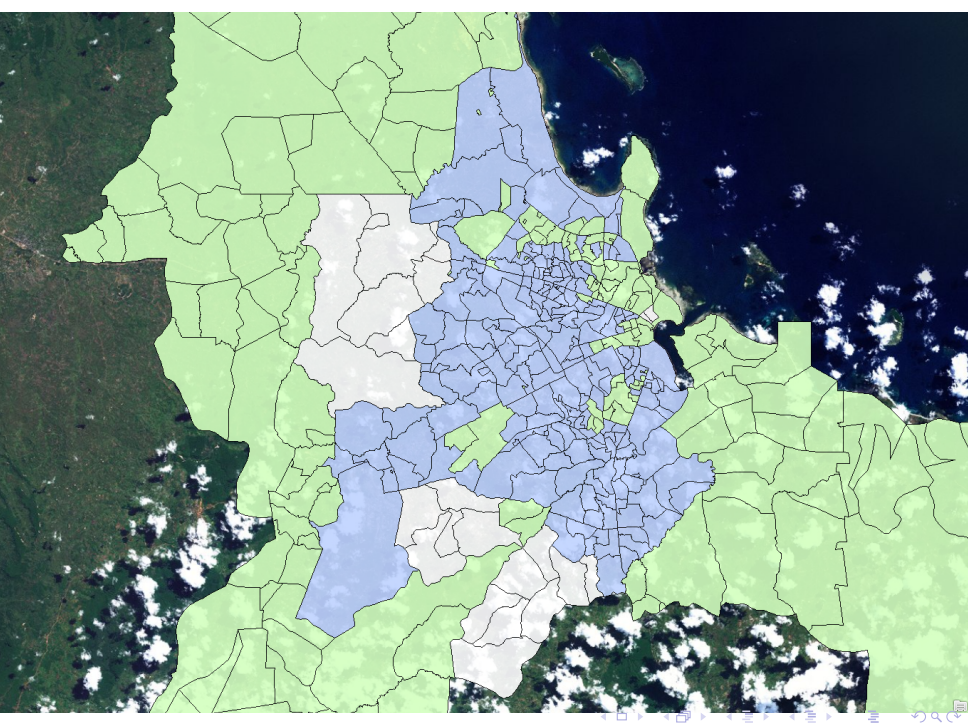
# RL take-up over time (Kinondoni Municipality)

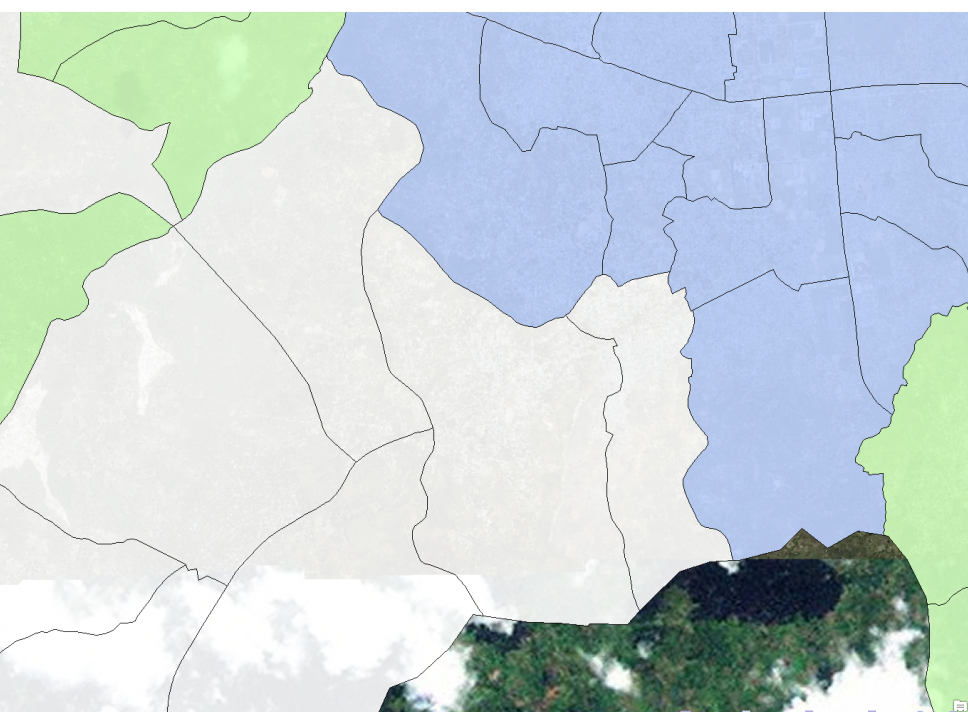


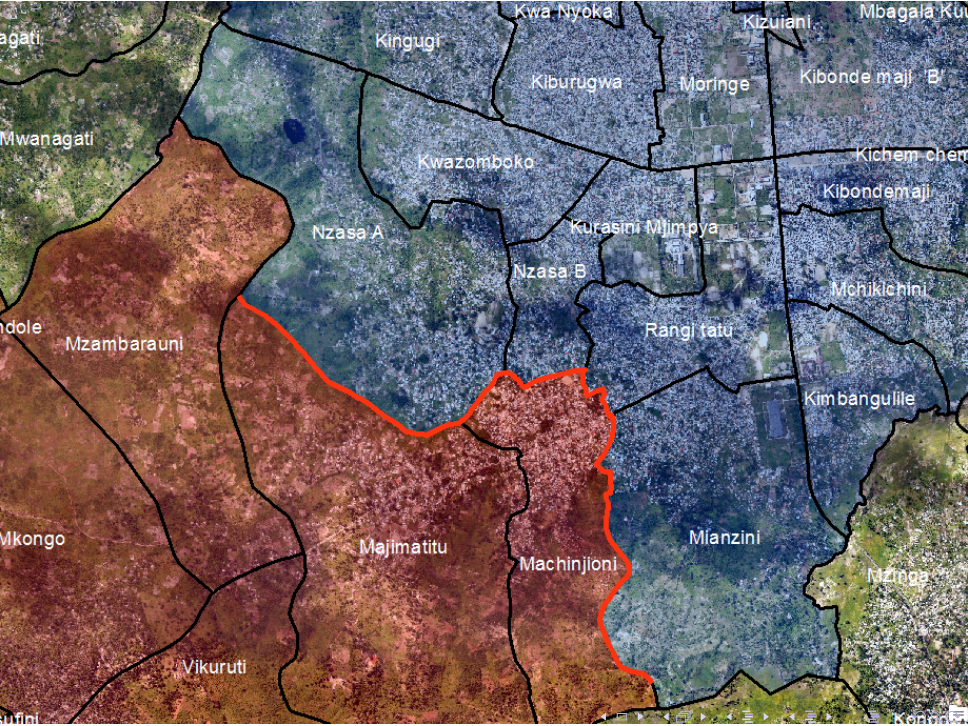
## Was the RL programme successful?

- To date there has been no rigorous evaluation of the RL programme
- Shemdoe (2012) finds some benefits, but suggests credit impacts might be limited without longer duration
- Registry makes it easy to find people to survey, but those who choose to purchase RLs might be systematically different than those who do not.
- Instead we use a 'natural experiment' to evaluate RLs by comparing households in areas which *should* have been included in Phase I to those who actually were.









agati

Mwanagati

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Mkongo

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Kingugi

Kwazomboko

Nzasa A

Nzasa B

Majimatitu

Vikuruti

Kwa Nyoka

Kiburugwa

Kurasini Mjimpya

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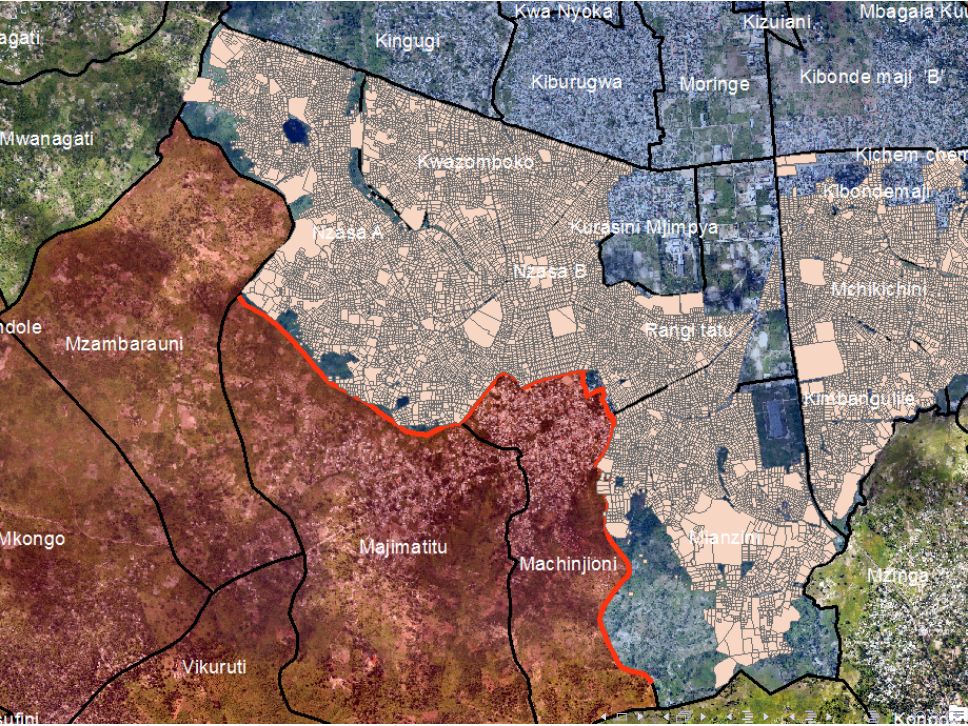
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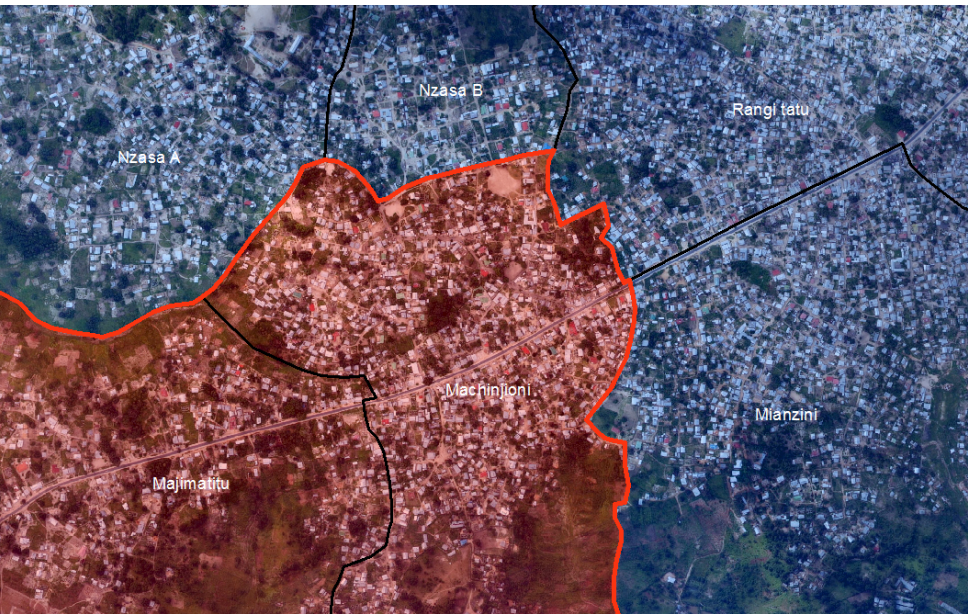
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ufini

Korobok









## Ongoing evaluation of the RL programme

Socioeconomic survey of households along this boundary to determine the impact of RLs on:

- Overall household welfare (income, assets, health, enterprise development)
- Household investment and perceived expropriation risk
- Access to formal credit, loan sizes and interest rates
- Land sales, perceptions of the state

### 3. CRO Impacts

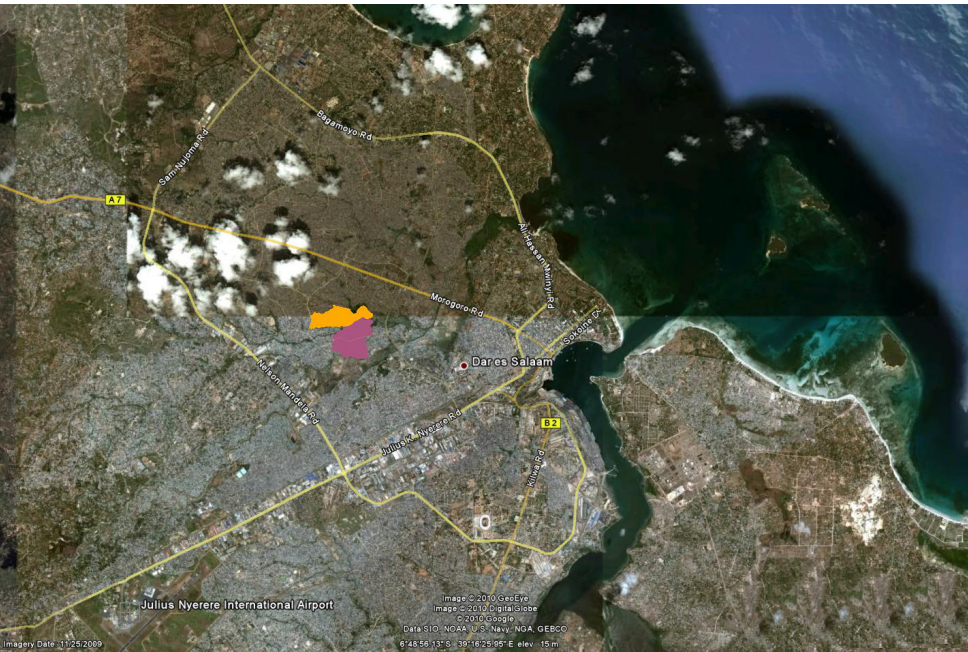
## Can we evaluate CROs?

- Relative difficulty of acquiring CROs makes them challenging to evaluate - very little private take-up, not enough titling en masse.
- Best way to study the impact of CROs is to lower the barriers to access and see what happens
- Dual IGC/World Bank funded study: teamed up with a Tanzanian NGO (Women's Advancement Trust - WAT) which specialised in helping people get access to title.
- Same problem as with evaluating RLs: the people who choose to get a CRO might be systematically different



## Setting for CRO study

- Setting is **Mburahati Barafu** and **Kigogo Kati**, two sub-wards in Kinondoni municipality.
- Low levels land tenure formalisation: less than 1% claimed to have CROs (even these are doubtful). Around 40% have residential licenses.
- Aim of the field experiment was to induce a large number of landowners to purchase a CRO.
- This was done primarily by bringing down the cost of a cadastral survey, one of the prerequisites of obtaining a land title.

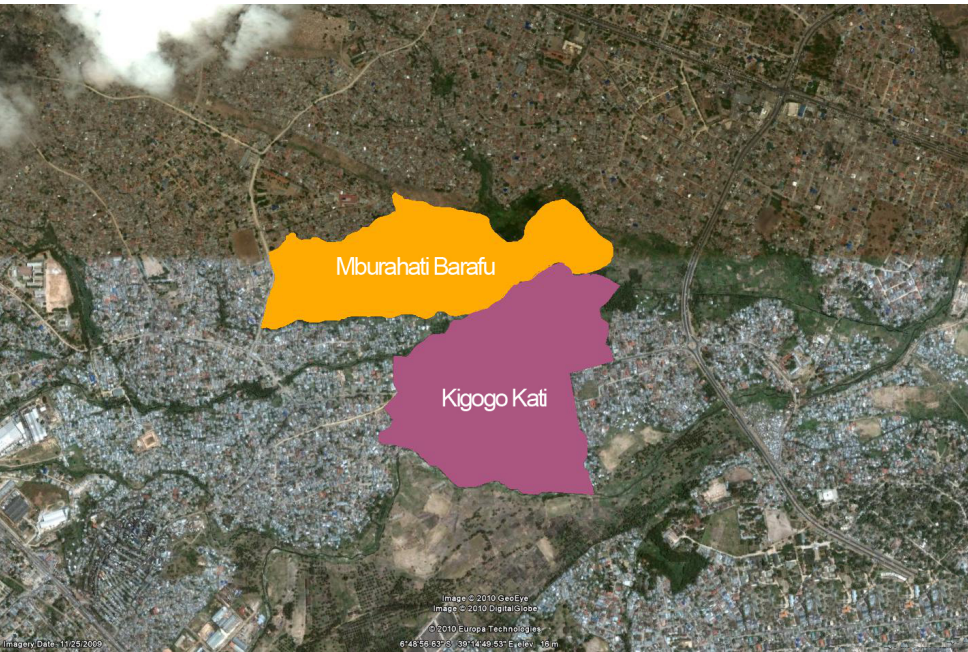


Julius Nyerere International Airport

Image © 2010 GeoEye  
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Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
6°48'58.13"S, 39°16'25.95"E elev. 15 m

Imagery Date: 11/25/2009





Mburahati Barafu

Kigogo Kati

Image © 2010 GeoEye  
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6°48'58" 63° 39'14" 49.53" E, elev. 16 m

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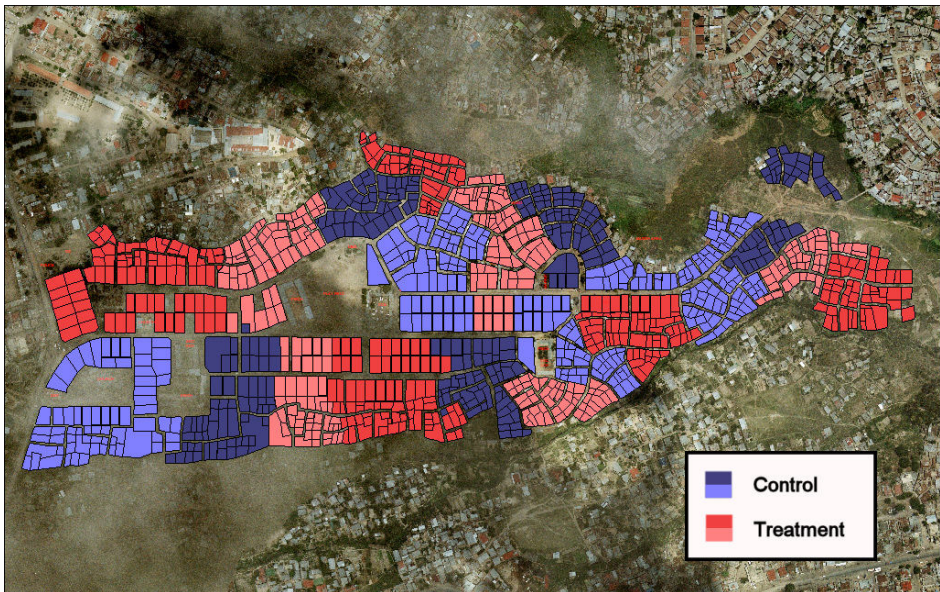
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# Project design

Project proceeded as follows:

1. Divide up the communities into 50 'blocks' of equal number of parcels
2. Randomize blocks into treatment and control groups (balanced on administrative data on parcels). Treatment comprised:
  - All parcels in treatment blocks were subject to a cadastral survey.
  - Owners were invited to pay tsh. 100,000 (avg cost of surveying and application fees) in exchange for the NGO providing them with a CRO.
  - Within treatment blocks, parcels (not people) were randomly allocated voucher discounts via a public lottery, covering (0-80%) of total cost.
  - Treated households could then sign up and begin repayment.





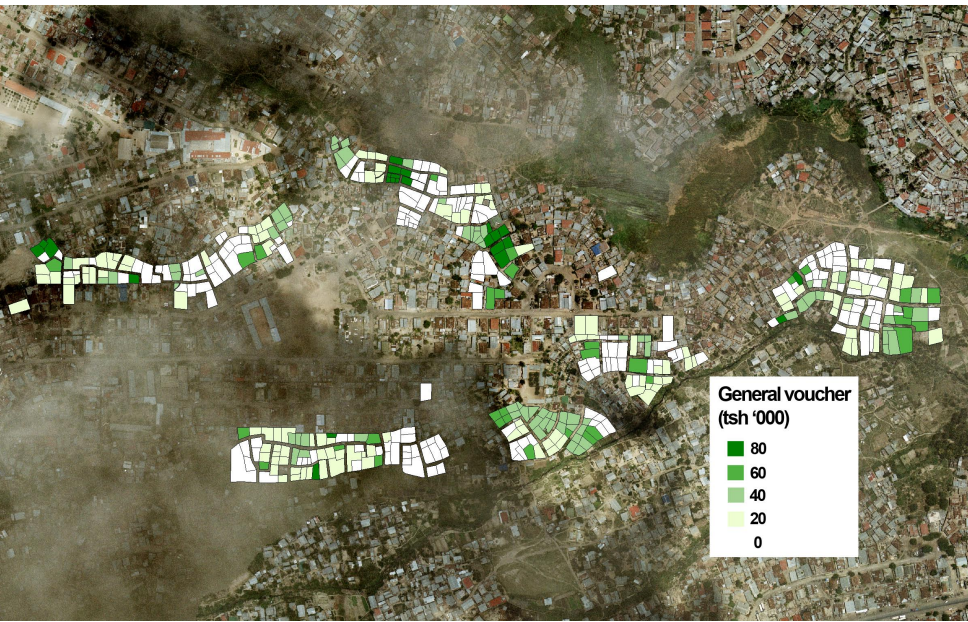
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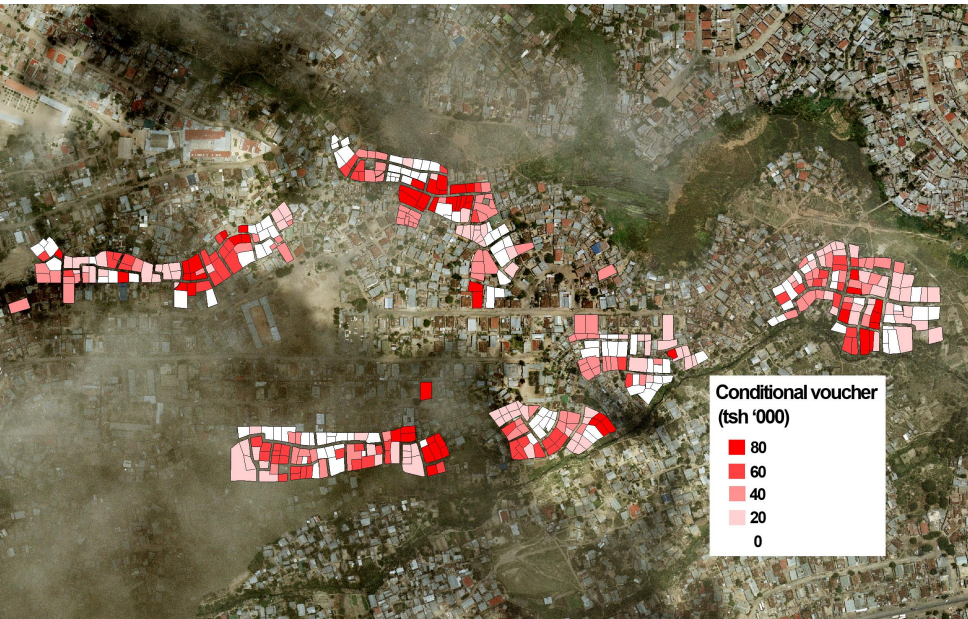
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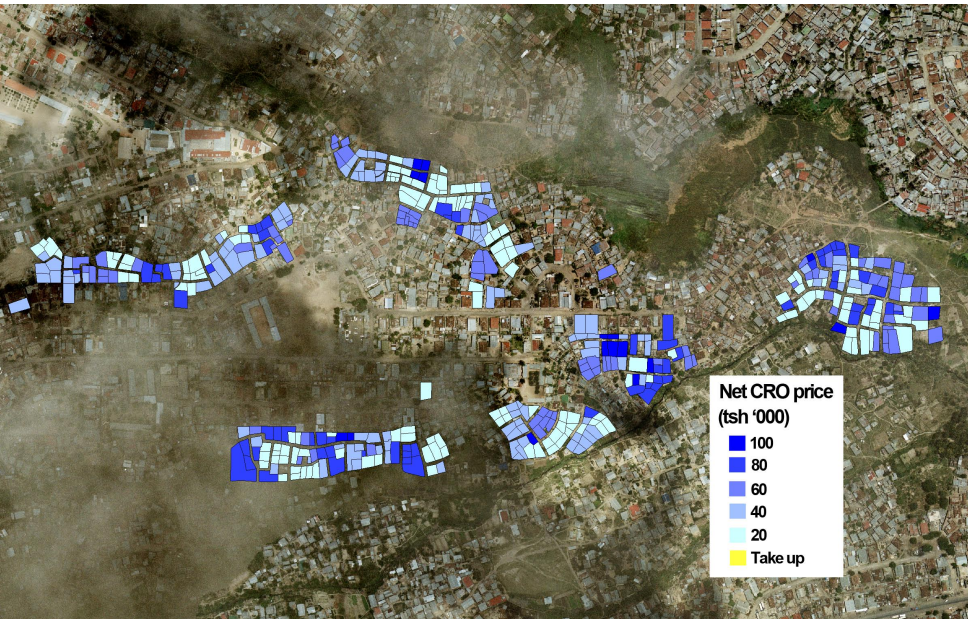
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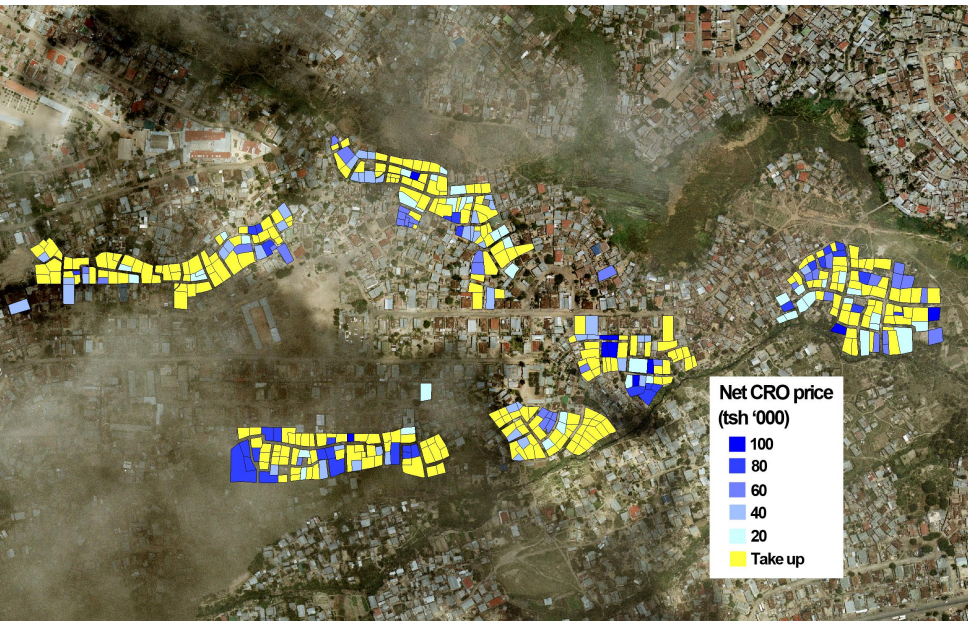












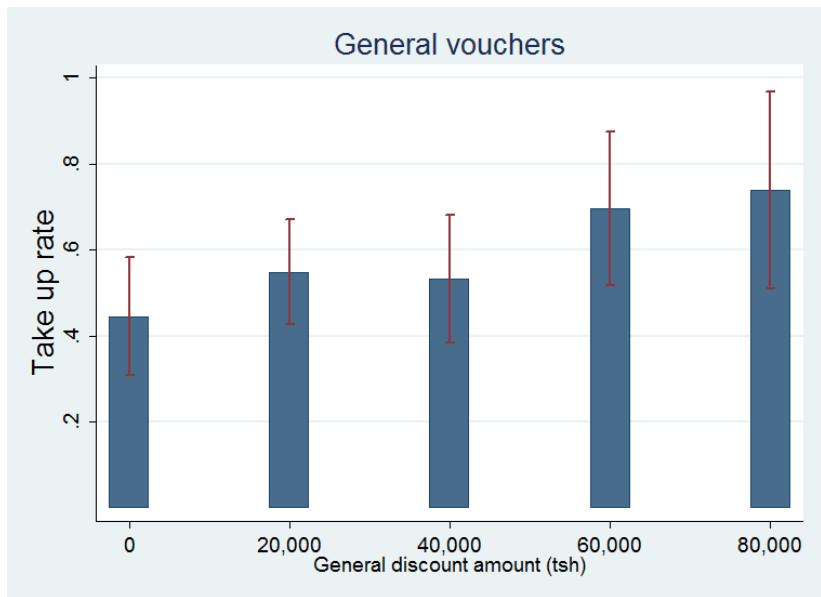
## 4. Results

## Results of CRO study

CROs have not been delivered yet, so follow-up survey is still pending, but we can still learn much from the demand results

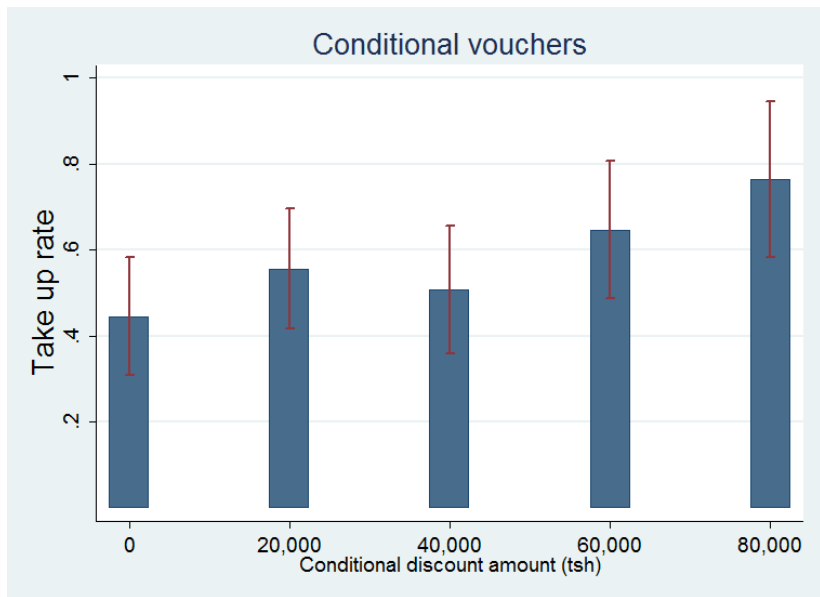
- Randomised vouchers allow us to observe demand at different levels of price (what is willingness-to-pay for title?)
- We can observe whether or not poorer households are turned away by higher prices
- How effective was the gender subsidy?

## What happened?

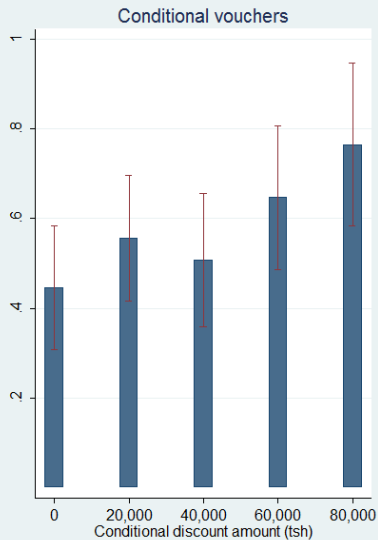
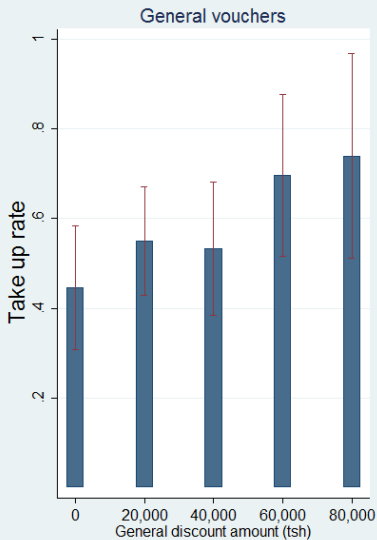




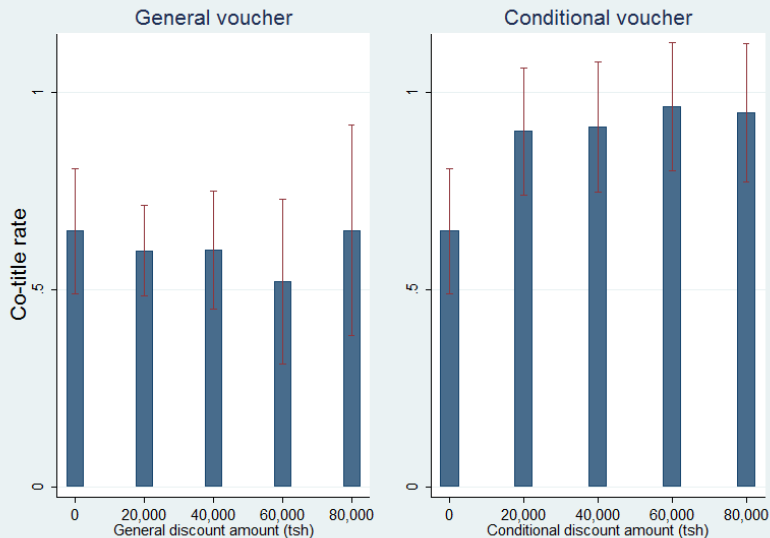
## What happened?



# Take-up of title



## Including women

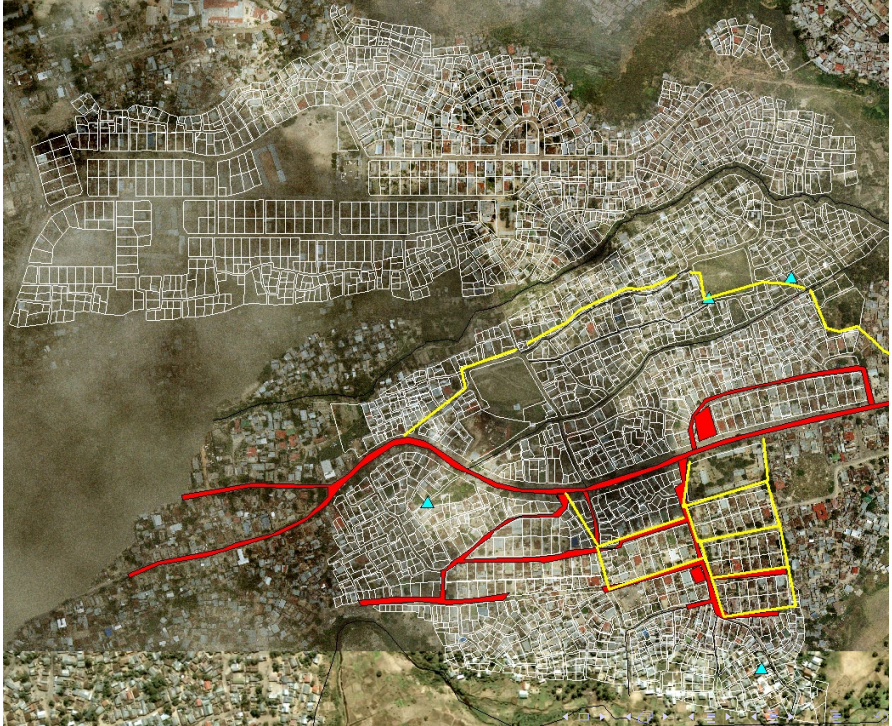


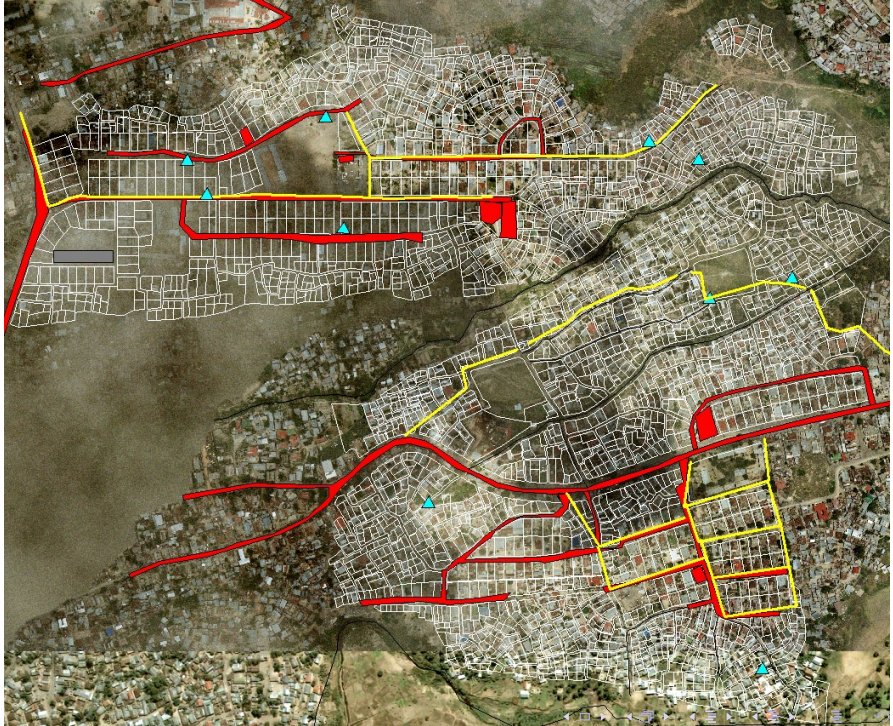
# Does slum upgrading increase the demand for formal tenure?

One of the two mtaa, Kigogo Kati was part of the CIUP (infrastructure upgrading) project

- No experimental variation in the introduction of infrastructure, but we can take advantage of the 'natural experiment' in the provision of infrastructure.
- Using CIUP upgrading documentation, we know the location of infrastructure improvements in Kati.
- Thanks to town plan map for Barafu, we also know where infrastructure improvements would go in Barafu *even though there are no plans to implement them.*
- Reasonable counterfactual: compare demand for CROs for households near infrastructure that will be improved (Kati) with those which are near locations that could be improved, but will not be.







# Impact of infrastructure on CRO adoption

	CRO Application		ln(Self-reported value)		Expropriation Risk	
	(1)	(2)	(3)	(4)	(5)	(6)
CIUP settlement	-0.353*** ( 0.043)	-0.368*** ( 0.044)	0.301*** ( 0.101)	0.260*** ( 0.096)	4.431 ( 3.200)	3.186 ( 3.250)
Distance to infrastructure	0.001 ( 0.000)	0.001 ( 0.001)	-0.001 ( 0.001)	-0.001 ( 0.001)	0.140*** ( 0.034)	0.122*** ( 0.033)
<b>CIUP X Distance</b>	<b>-0.002***</b> ( 0.001)	<b>-0.002***</b> ( 0.001)	<b>-0.003*</b> ( 0.002)	<b>-0.001</b> ( 0.002)	<b>-0.183***</b> ( 0.052)	<b>-0.190***</b> ( 0.051)
constant	0.568*** ( 0.037)	2.815 ( 2.123)	3.339*** ( 0.067)	7.480 ( 5.692)	37.261*** ( 2.431)	-326.425** ( 157.772)
N	1141	1033	1015	1013	1035	1033
$\beta_2 + \beta_3$	-0.001*** (0.000)	-0.001*** (0.000)	-0.004*** (0.001)	-0.002* (0.001)	-0.044 (0.039)	-0.069* (0.039)
Controls	No	Yes	No	Yes	No	Yes



## Results of CRO study

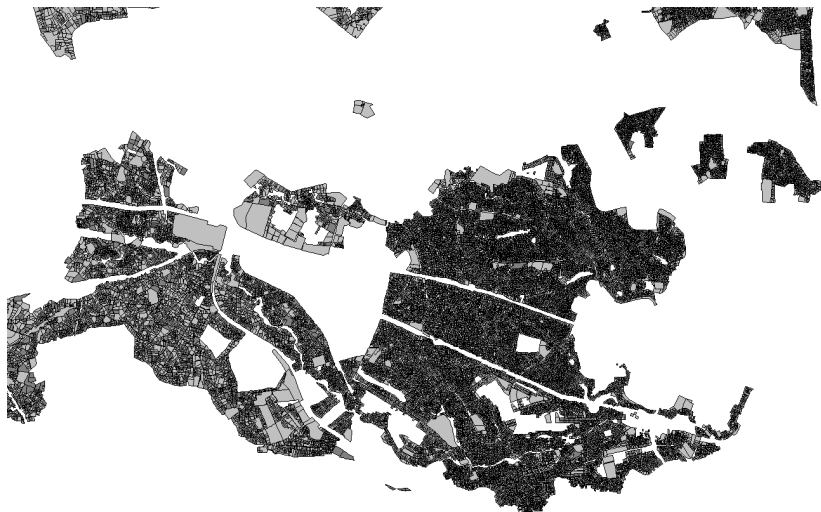
Households which are closer to improved infrastructure:

1. Are more likely to buy a CRO
2. Report higher perceived land values
3. Report higher perceived expropriation risk

## Neighbour effects in CRO take-up

- Maps of municipal-wide residential license take-up reveal heavy geographic clustering.
- Residents might be influencing each other's decisions to buy a RL/CRO
- We can take advantage of randomised intervention, which convinced some households to adopt a CRO.
- Using this random variation, we can test if a household's decision to buy is influenced by its neighbours' decision to buy.
- Look at the impact of the CRO adoption # of five-closest neighbours on the probability that a household also buys.

## Spatial patterns in RL take-up

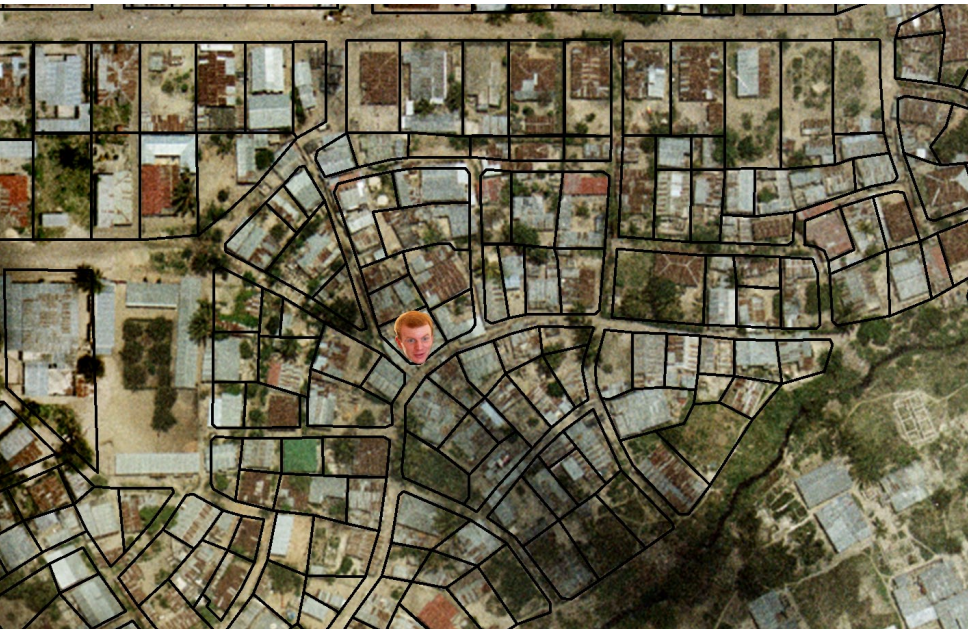


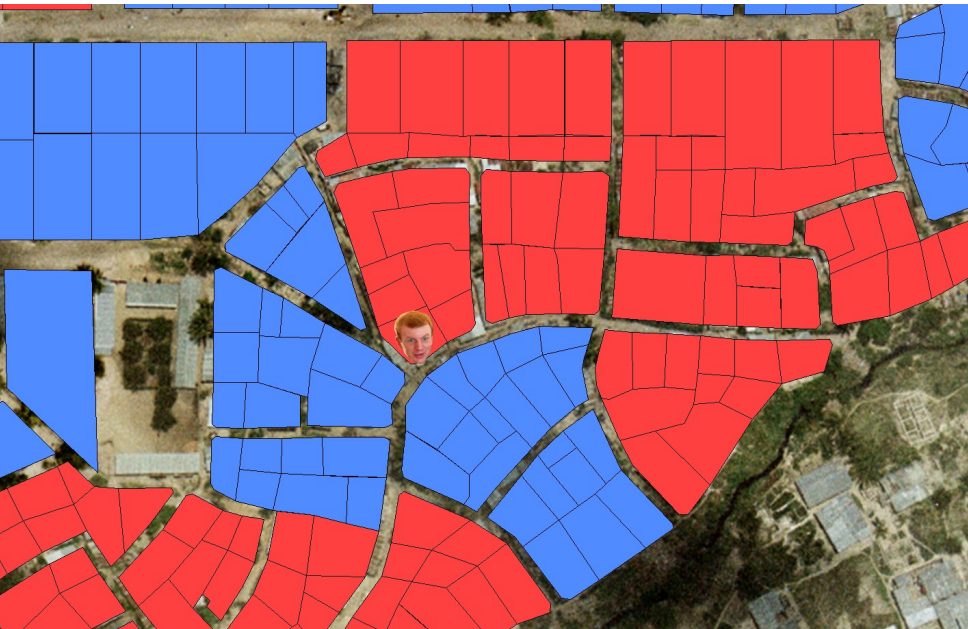
# Demand for land titling shows heavy geographic clustering



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## Neighbour effects in CRO take-up, continued

- Results indicate that a household's probability of buying a CRO goes up between 3-15% for every proximate neighbour who makes a purchase.
- This is equivalent to a 10-50,000 Tsh. (10- 50%) subsidy on the cost of a land title!
- Effects seem to be strongest for households with a pre-existing concern over land expropriation
- Results hold independently in both Barafu and Kati, as well as RL land registry data data ( $> 150,000$  land parcels), so evidence has some external validity.

## 5. Lessons

## Generating demand for formal title

1. **Price sensitivity:** very little coverage at prices over tsh 100,000
2. **Gender equality is cheap:** imposing co-titling does not dampen demand
3. **Infrastructure might increase demand:** proximity to improvements predicts take-up
4. **Social multipliers in take-up:** CRO adoption is contagious

## Generating demand for formal title, continued

1. **Price sensitivity:** full cost of CROs needs to be as cheap as feasible
2. **Gender equality is cheap:** easy to get women on titles, but will this change anything?
3. **Infrastructure might increase demand:** sequence infrastructure first, then revenue
4. **Social multipliers in take-up:** interventions need to be done at scale

## Difficulties of obtaining a CRO

1. Information is limited for those living in unplanned settlements
2. Too many steps/time cost is high
3. Fees changes

## More to come?

There are still opportunities out there to evaluate previous urban policies which might have gone unnoticed