



human settlements

Department:  
Human Settlements  
REPUBLIC OF SOUTH AFRICA

# Measuring Success in Human Settlements Development

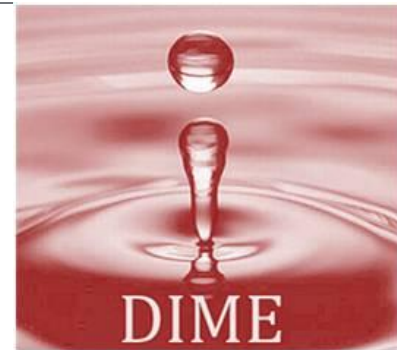
Phillip Chauke, NDOHS  
Mulalo Muthige, NDOHS  
Aidan Coville, DIME, World Bank

Researchers: Arianna Legovini, Nandini Krishnan and Sebastian Martinez

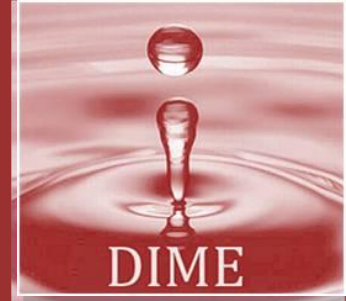
Generous support from SIEF is gratefully acknowledged



**DIME SEMINAR  
WASHINGTON, DC, 7 JULY 2011**

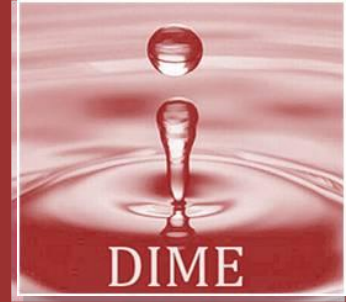


# Collaboration



- Department of Human Settlements has been working on impact evaluation program with World Bank since 2006
- Monitoring and Evaluation has increasingly become an integral component of the Human Settlements program of work
- As a middle income country, focus of collaboration with WB has been on providing technical support rather than lending

# UISP in Brief



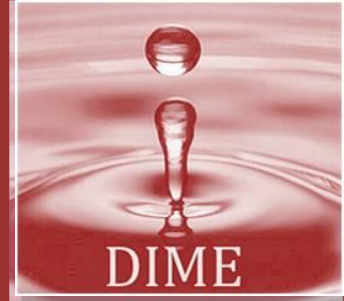
- Current Government has changed from Department of Housing to Human Settlements and is targeting 400 000 household upgrades by 2014
- Provides a holistic view to upgrading (not just houses)
- Aims to provide incremental upgrading of informal settlements to promote sustainability and economic and social integration
- Will relocate informal settlement dwellers to well-located land as a last resort



human settlements

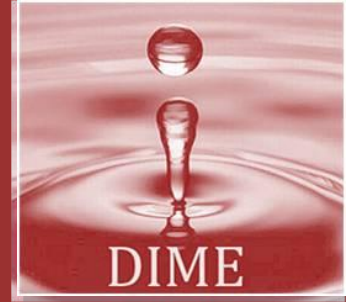
Department:  
Human Settlements  
REPUBLIC OF SOUTH AFRICA

# Motivation for Study



- To develop sustainable human settlements we need to measure what is working, what is not and why in order to improve service delivery
- Difficult to isolate the impact of a human settlements program when multiple other projects and programs are regularly implemented
- We use an Impact Evaluation (IE) framework to measure the causal link between human settlements interventions and the improved lives of beneficiaries

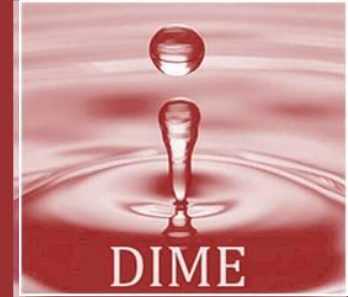
# Incremental Upgrading



human settlements

Department:  
Human Settlements  
REPUBLIC OF SOUTH AFRICA

# Interventions



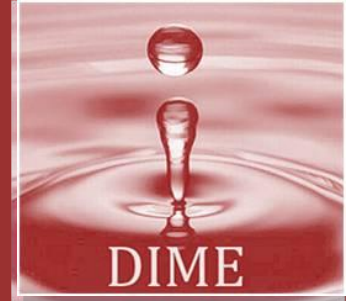
Project Area	Intervention:	Intervention
Limpopo	Effect of relocation	Control: Informal settlement dwellers Treatment: HHs relocated 1 mile away to new, fully serviced houses
Free State	<i>In situ</i> upgrading	Treatment 1: Serviced stand Treatment 2: House on stand without sanitation



human settlements

Department:  
Human Settlements  
REPUBLIC OF SOUTH AFRICA

# Indicators



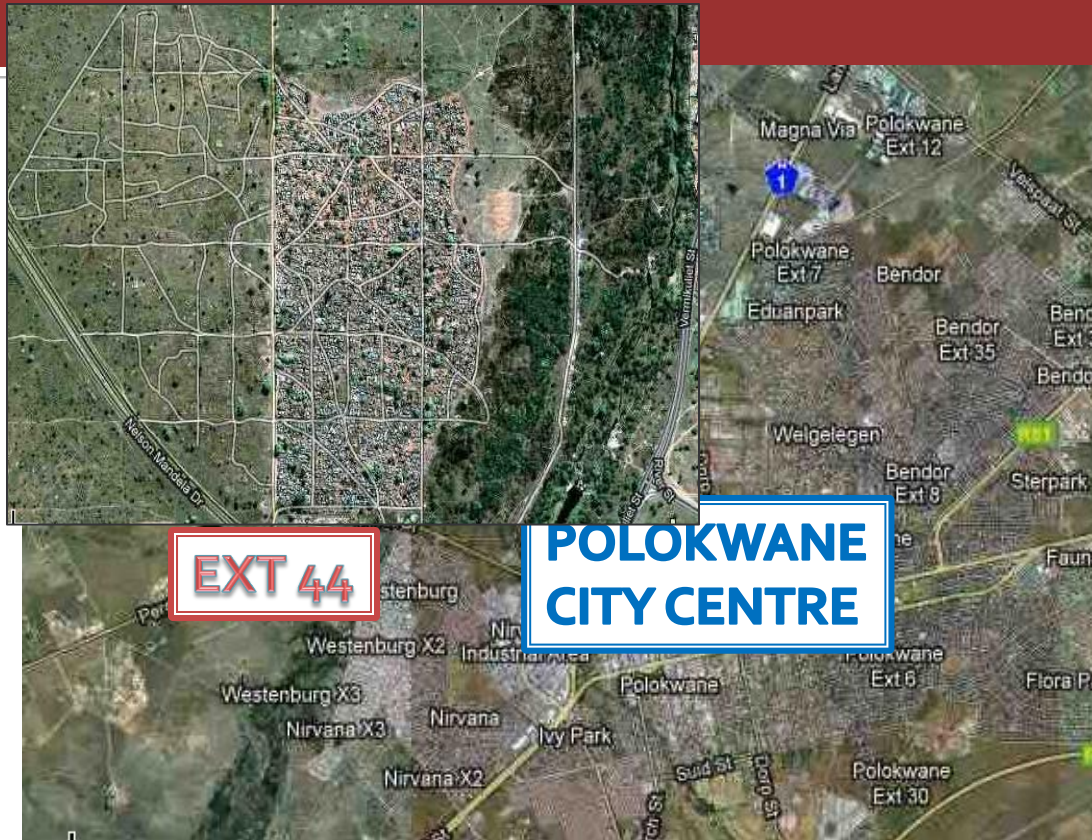
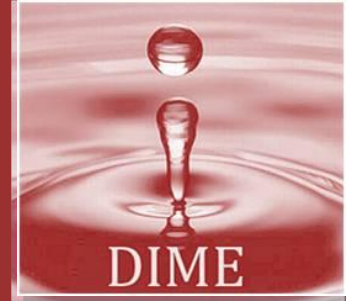
- What impact has upgrading or relocation had on:

- Health
- Security
- Education
- Household Composition
- Income and Expenditure Patterns
- Employment
- Child Development
- Tenure Security and housing upgrades
- Social Cohesion...

...for the recipients of the upgrading program?



# Identification Strategy



## SAMPLE SIZES

Ext 44/76: 444

Disteneng: 727

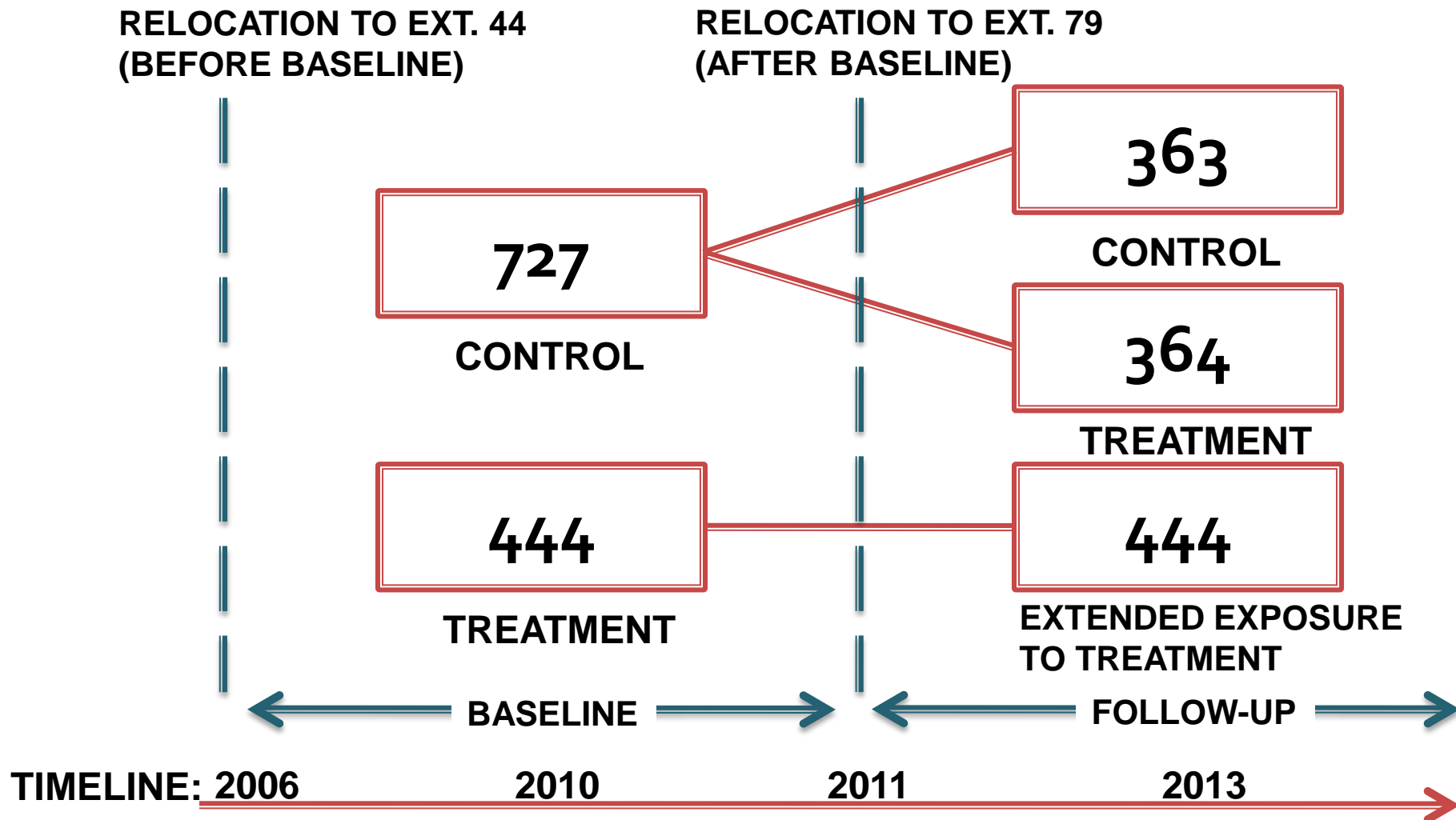
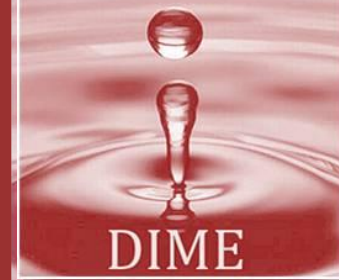
TOTAL: 1171



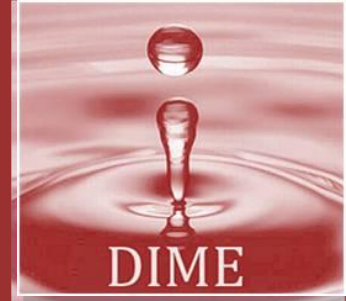
RELOCATED NOT  
RELOCATED



# Limpopo: Prospective Sampling Design

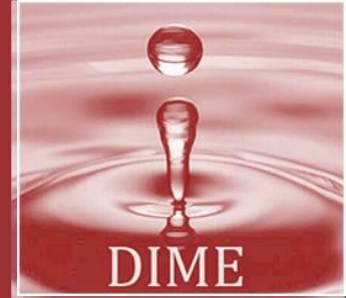


# Caveats



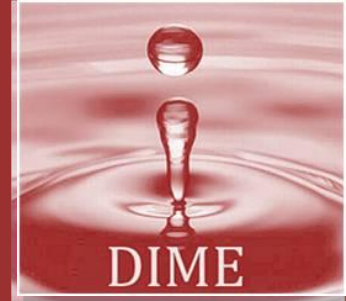
- Difficulties with data collection in politically volatile areas (non response rates up to 15%)
- Identification strategy not foolproof
- Attrition rates and “household transfers” are common but very hard to measure
- Measures overall impact (ie. including the ring-fencing effects in Limpopo)
- Experimental prospective studies should be conducted to confirm results
- These results are NOT nationally, or provincially representative, but rather indicative

# Structural Changes (relocation)



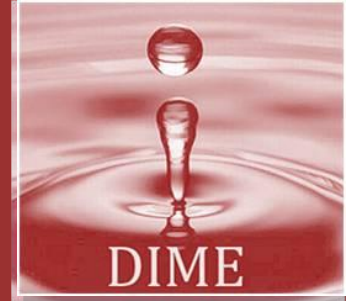
Indicator	Control	Treatment
Dwelling made from brick or concrete	2%	100%
Concrete floor	21%	94%
Iron roof	85%	98%
Number of sleeping rooms	1.08	2.07
Flush toilet	0%	90%
Electricity	0%	100%
Running water in property	3%	100%

# Structural Changes (in situ)



Indicator	Treatment 1: Services	Treatment 2: Houses without sanitation
Dwelling made from brick or concrete	24%	100%
Concrete floor	9%	57%
Iron roof	90%	90%
Number of sleeping rooms	1.14	2.07
Flush toilet	95%	0%
Electricity	96%	97%
Running water in property	93%	42%

# Overview of Results (1)



## **1. Child Health**

Under 5 child health improves, but overall health for all HH members is unaffected (relocation)

Serviced stand improves health more than unserviced GSH

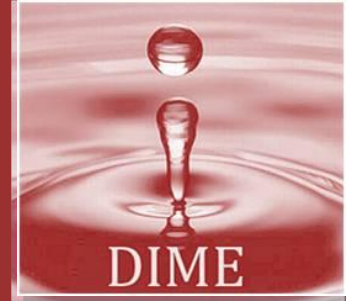
## **2. Effects of Improved Tenure Security**

Personal expenditure on house upgrading improves dramatically for formalized houses. Serviced stands in Free State exhibit mild levels of upgrading.

A major source of income for households in formalized settlements comes from “backyard rentals”



# Overview of Results (2)



## **3. Asset Accumulation**

New services (e.g. electricity) increase asset accumulation which increases over the long term, but asset accumulation is sustained through loans or credit

## **4. Crime Perceptions and Reality**

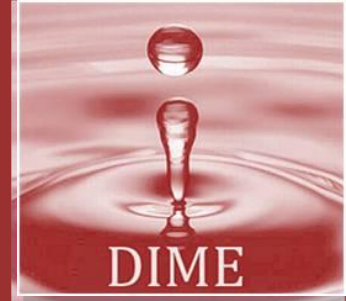
Perceptions of improved security in the house and settlement improve significantly but household burglaries remain constant (relocation)

Initial evidence suggests an adverse affect to asset accumulation (from electrification) increases likelihood house will be robbed

## **5. Household Size**

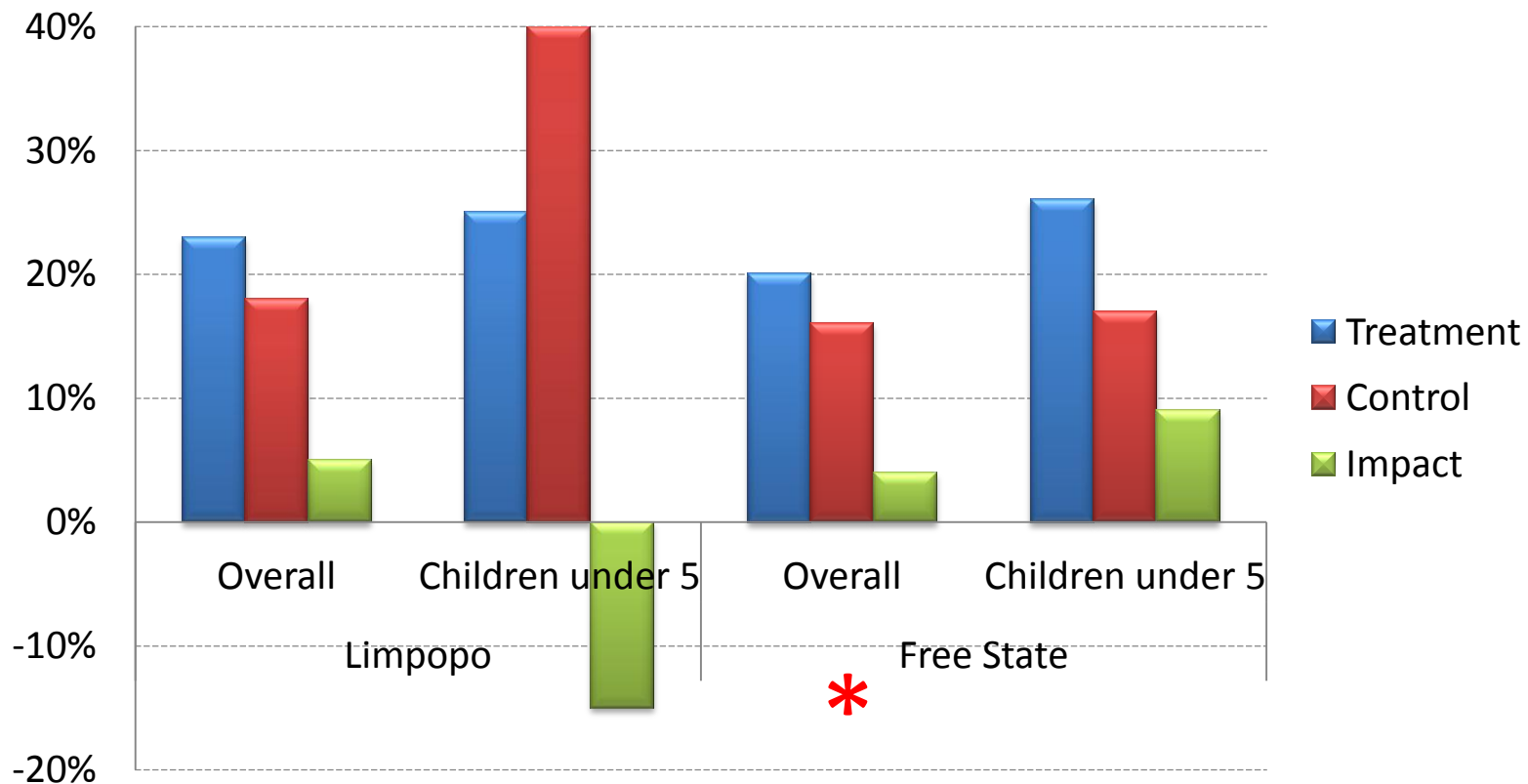
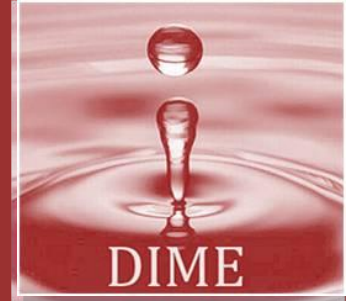
Household sizes increase as a result of the upgrading process and this household shift also changes community engagement patterns

# Main Results

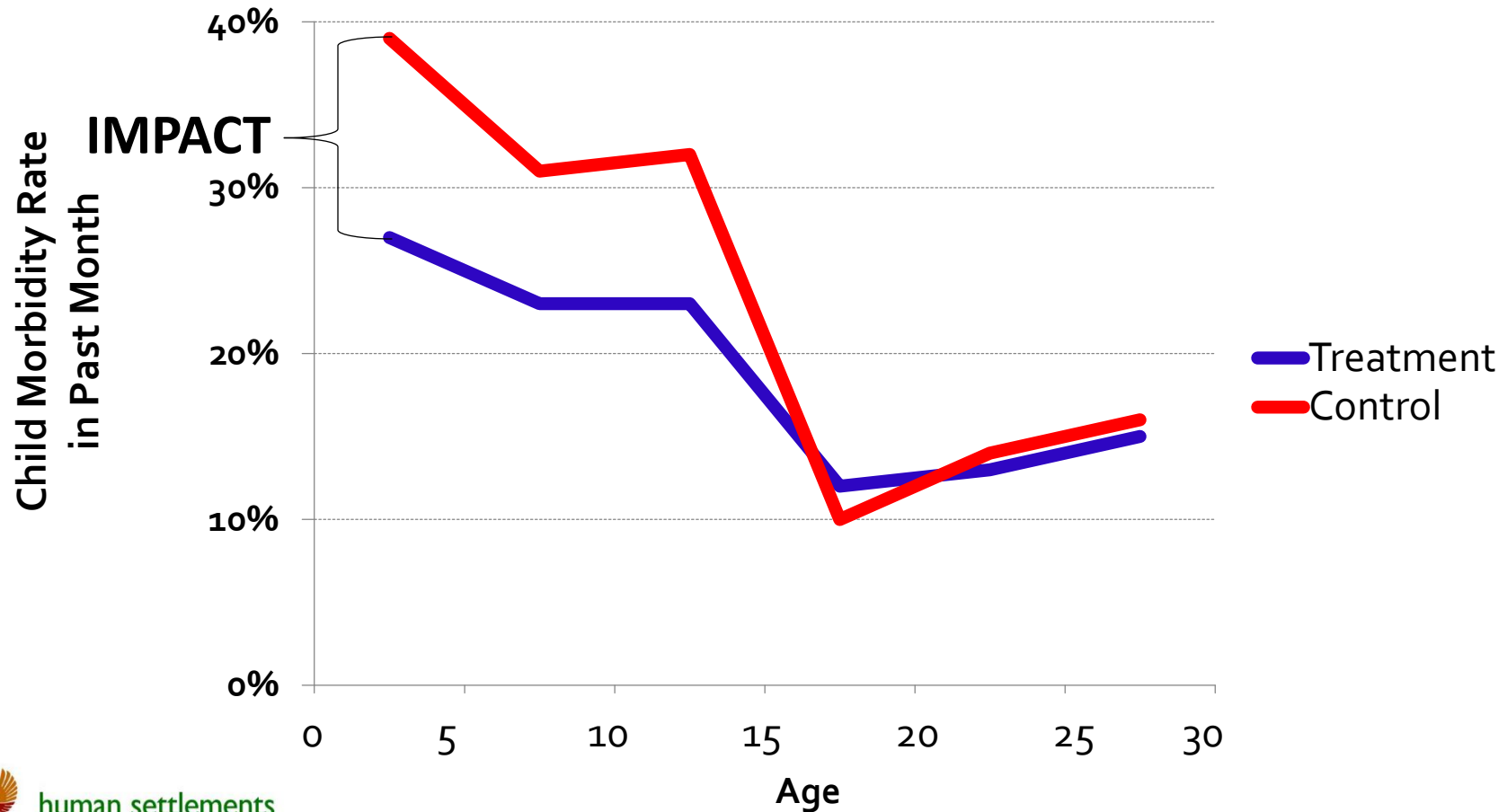
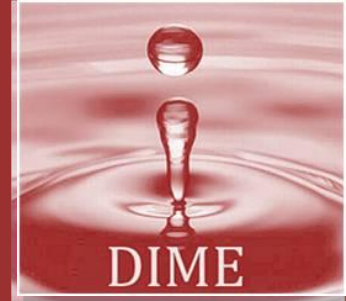


1. Child Health
2. Effects of Improved Tenure Security
3. Asset Accumulation
4. Crime
5. Household Sizes

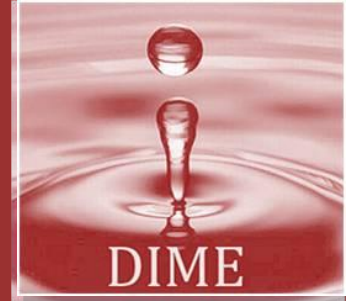
# Morbidity Rates (LP, FS)



# Limpopo Morbidity by Age



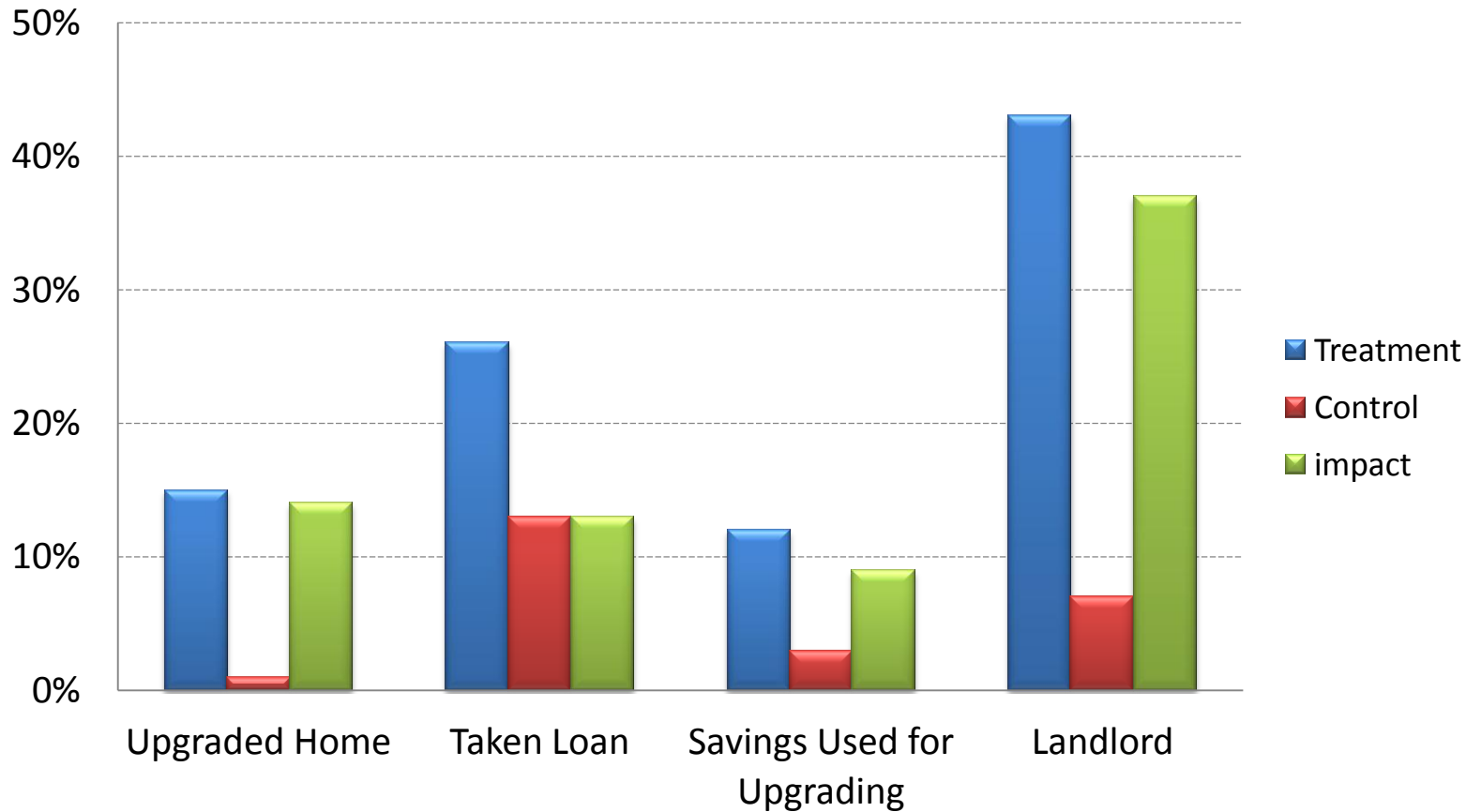
# Main Results



1. Child Health
2. Effects of Improved Tenure Security
3. Asset Accumulation
4. Crime
5. Household Sizes



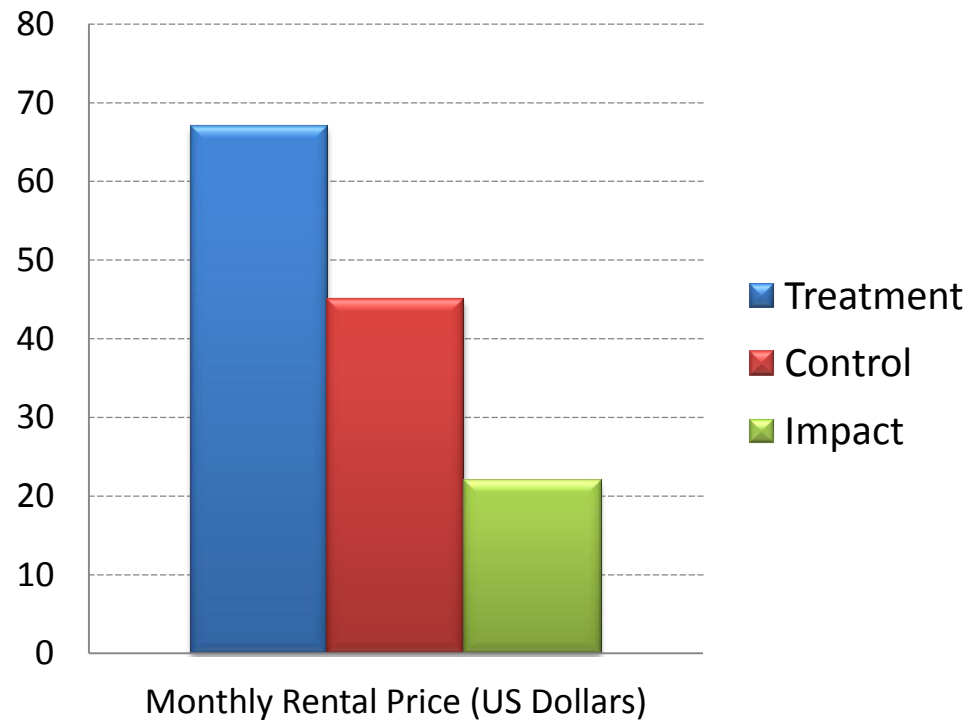
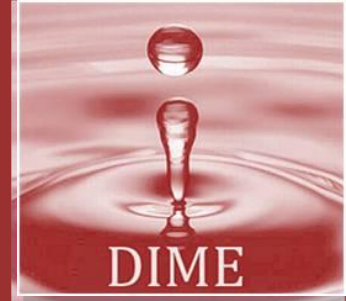
# Effects of Improved Tenure Security (Relocation)



human settlements

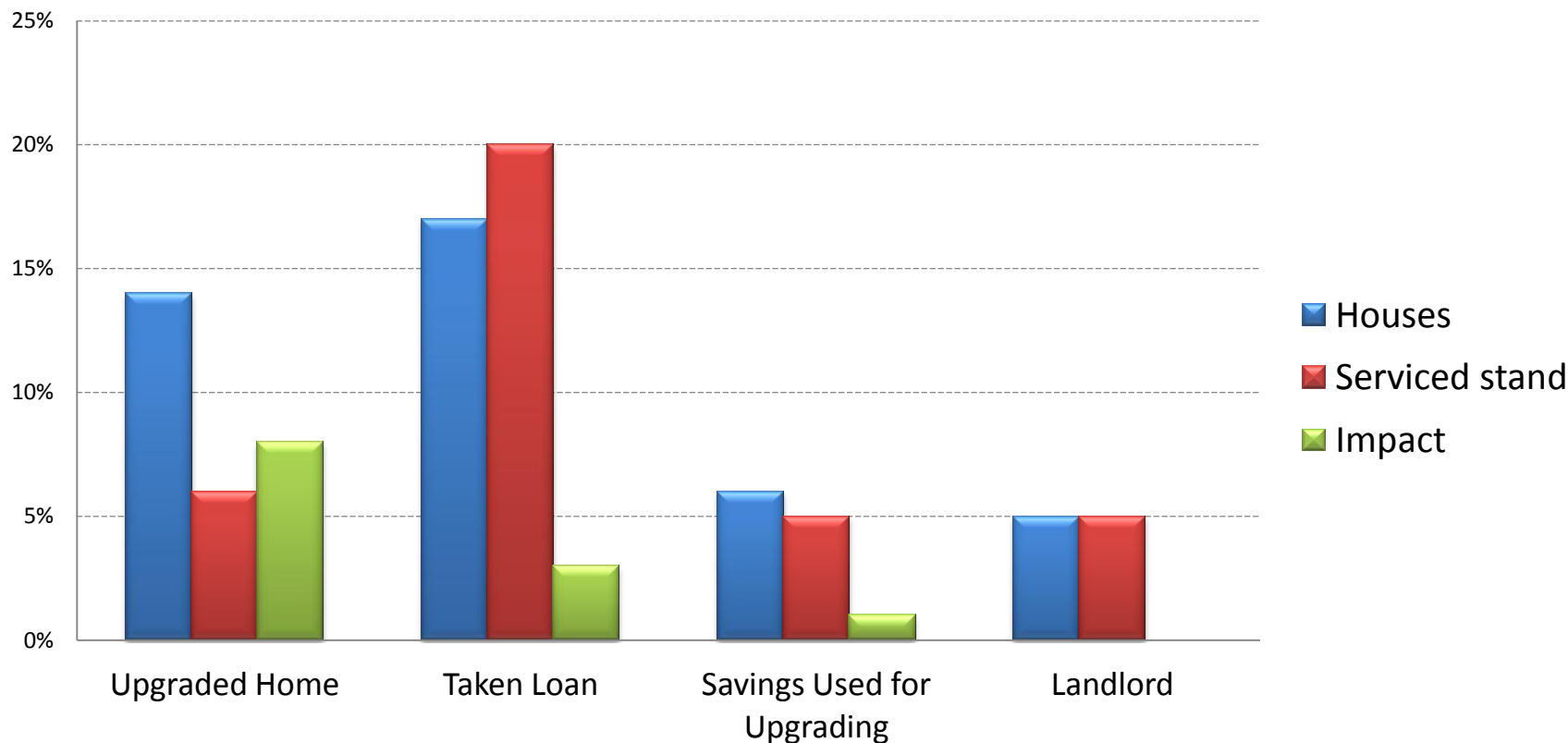
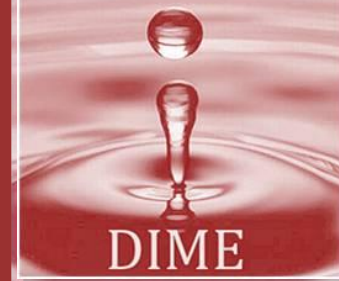
Department:  
Human Settlements  
REPUBLIC OF SOUTH AFRICA

# Rental Price



\*

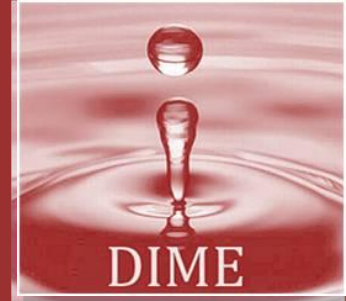
# Effects of Improved Tenure Security (*In Situ*)



human settlements

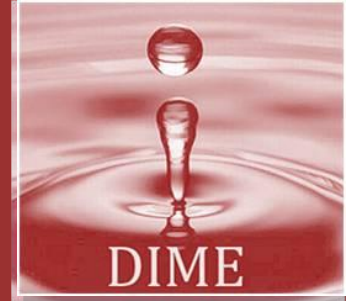
Department:  
Human Settlements  
REPUBLIC OF SOUTH AFRICA

# Recommendation 1:



Given the potential source of income, regulation and possible formalization rather than eradication of backyard rentals could be considered.

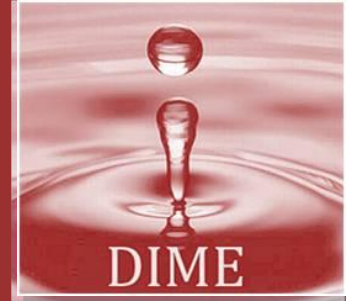
# Recommendation 2:



The final consolidation phase of the UISP (providing houses) can consider how best to complement, under certain circumstances, the upgrading that households already conduct on their serviced stands.

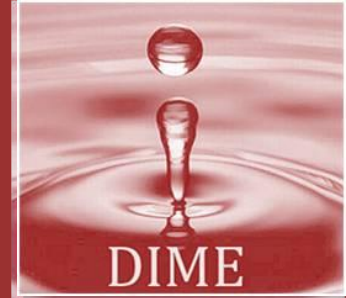


# Main Results

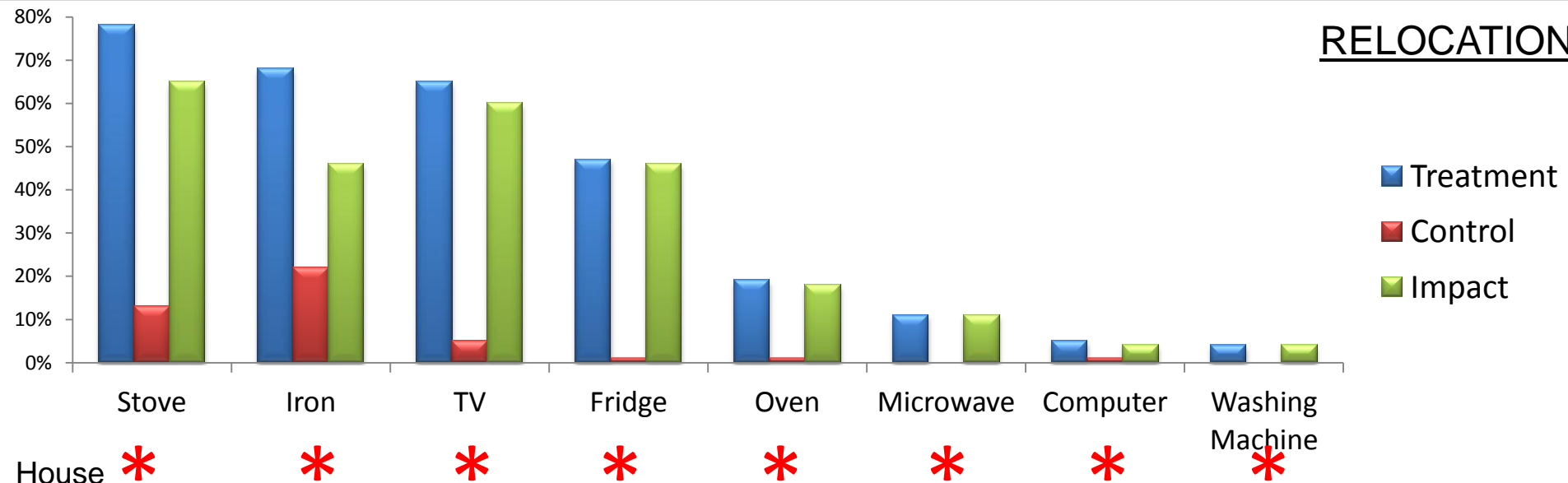


1. Child Health
2. Effects of Improved Tenure Security
3. Asset Accumulation
4. Crime
5. Household Sizes

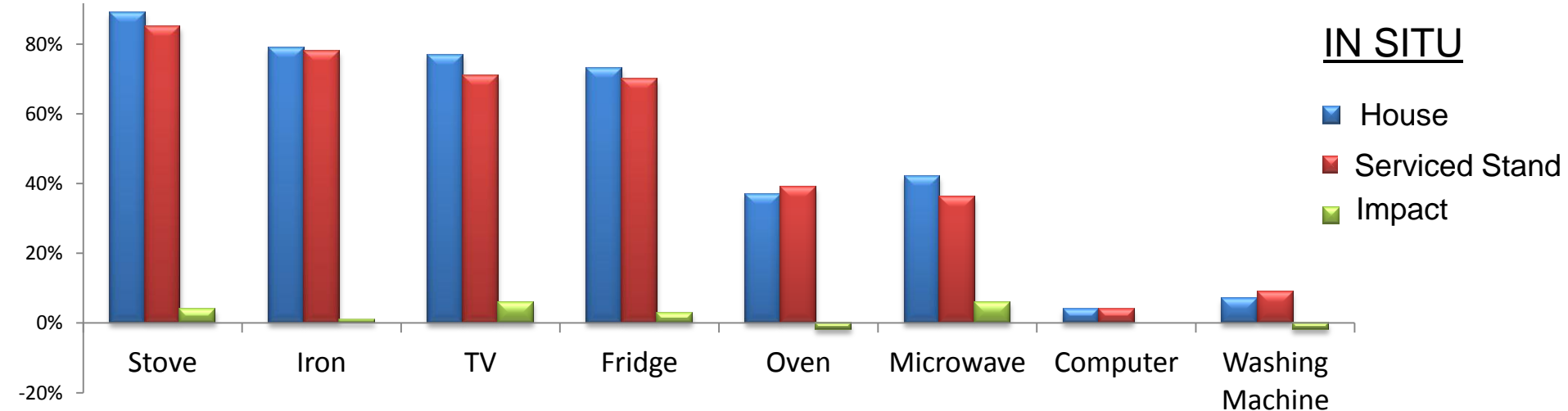
# Asset Accumulation



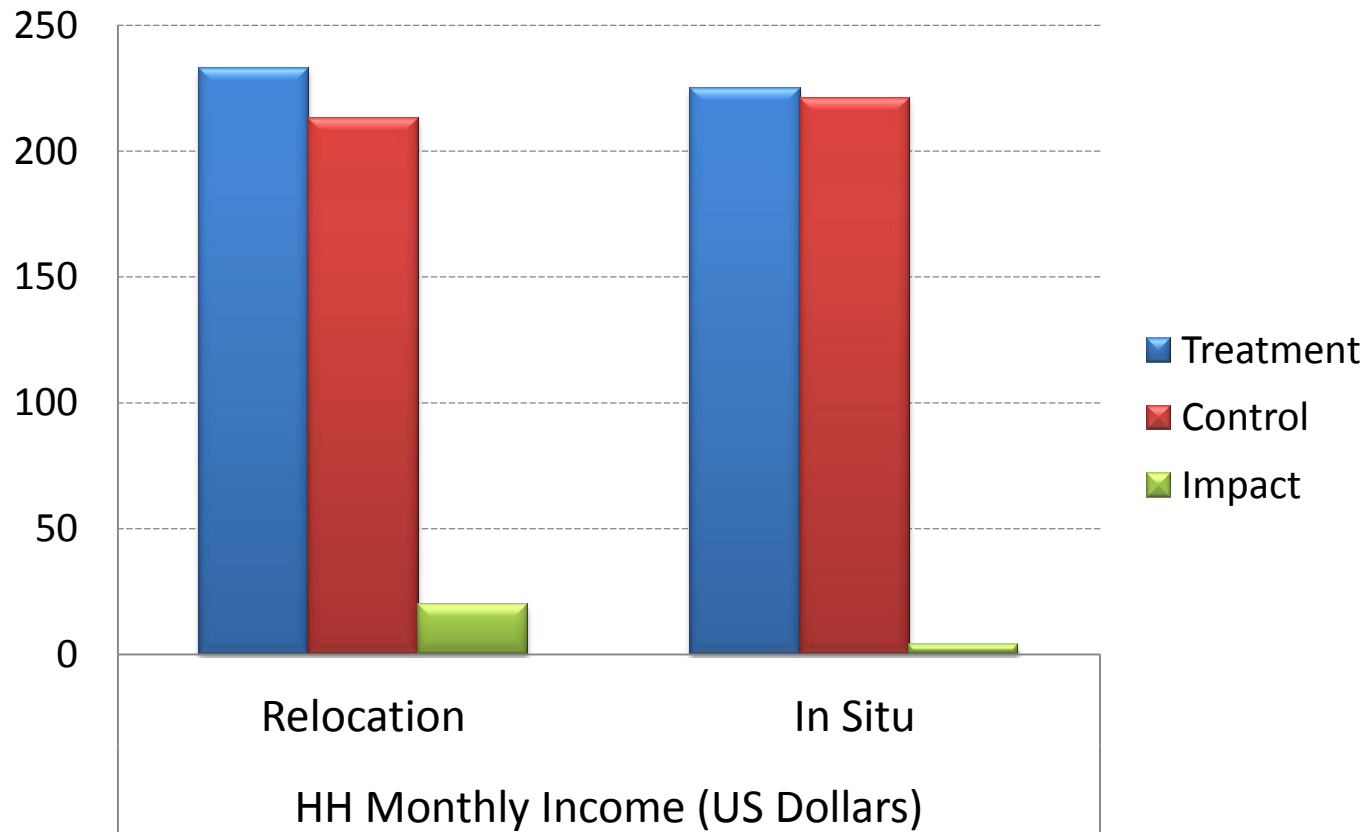
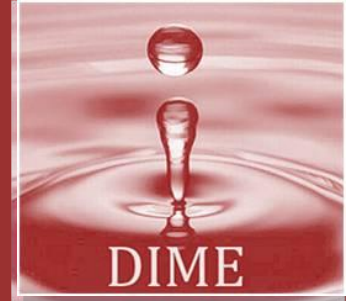
## RELOCATION



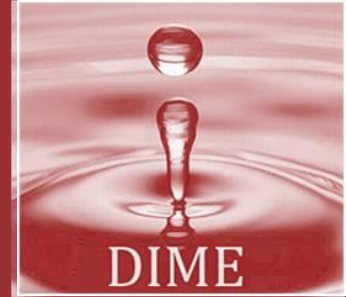
## IN SITU



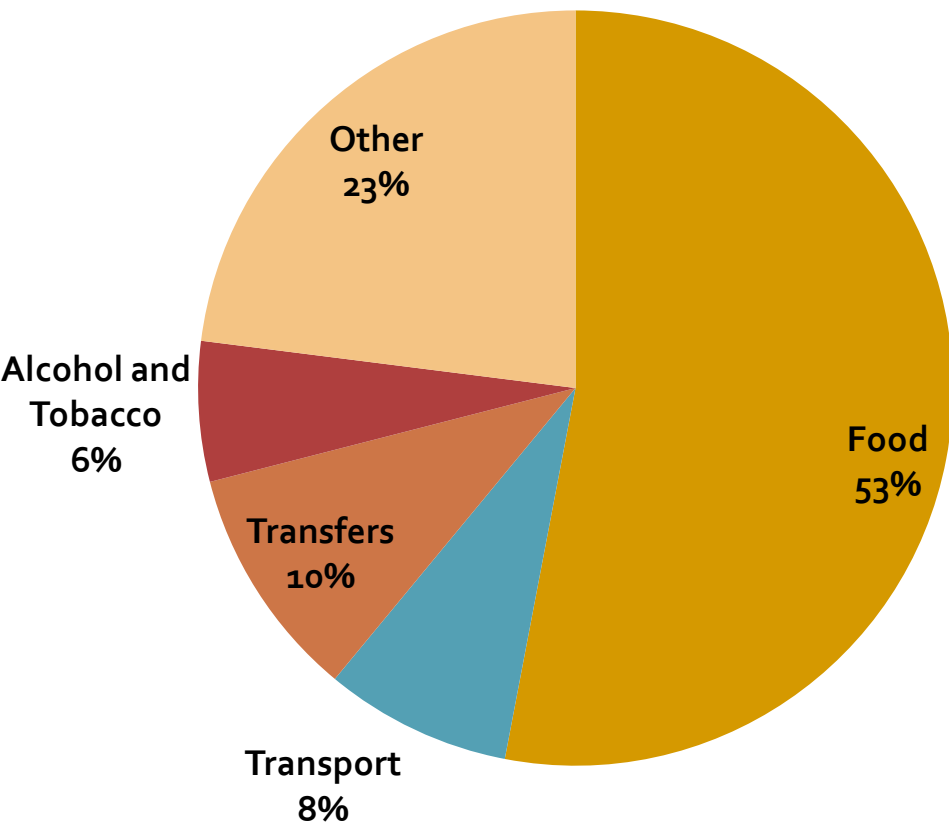
# Household Income



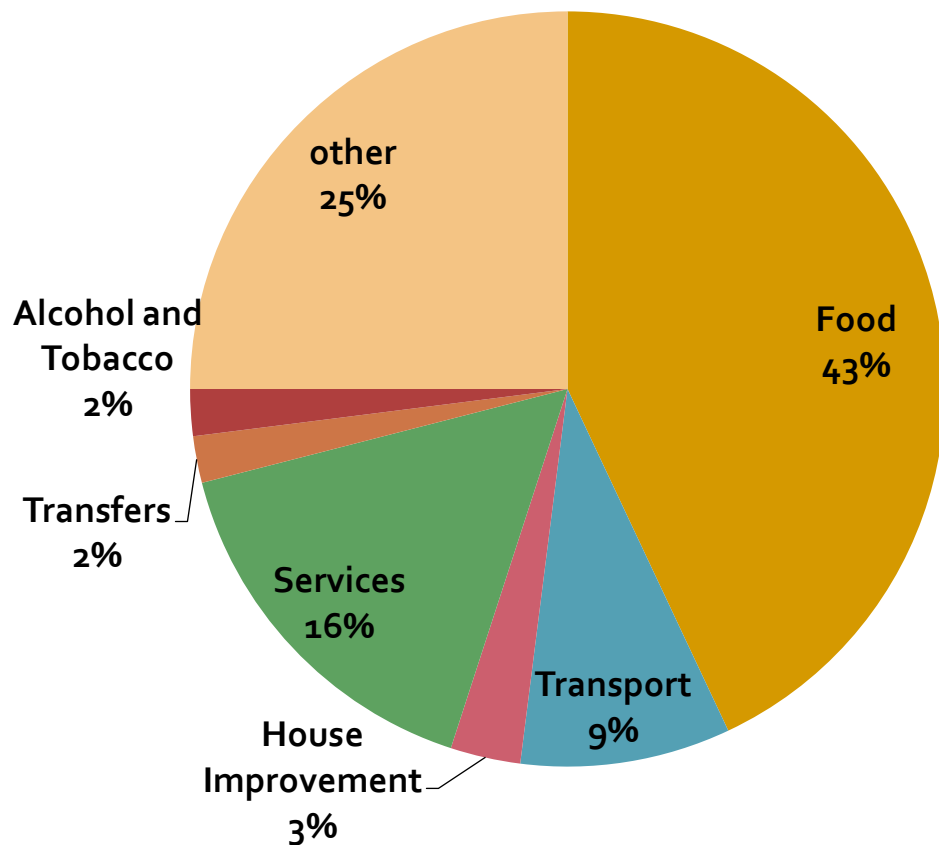
# Expenditure Patterns (Relocation)



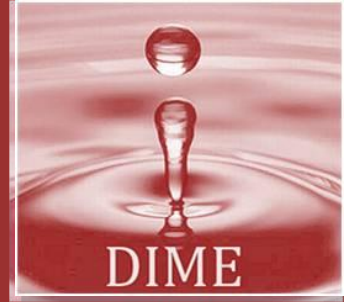
## CONTROL



## TREATMENT

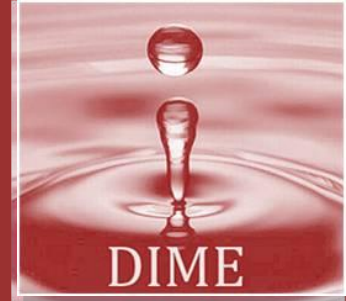


# Recommendation 3:



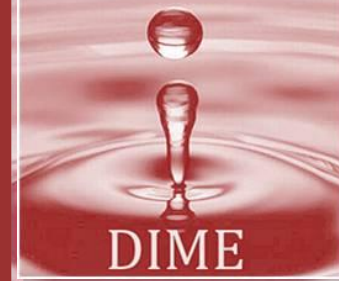
Households should be provided with financial awareness support when upgrading takes place to ensure that their resultant increases in expenditure are sustainable and do not impose heavy debt burdens on themselves or the Municipality

# Main Results

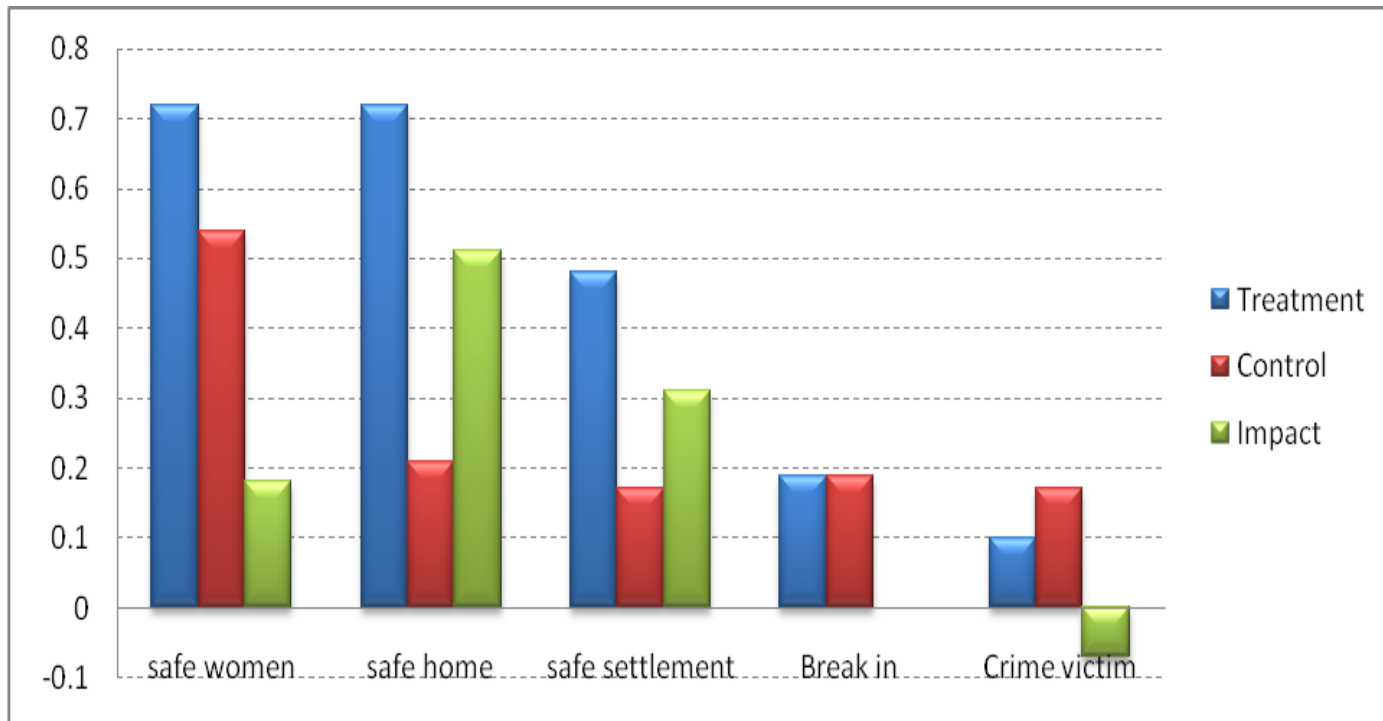


1. Child Health
2. Effects of Improved Tenure Security
3. Asset Accumulation
4. **Crime**
5. Household Sizes

# Crime: Perception and Reality

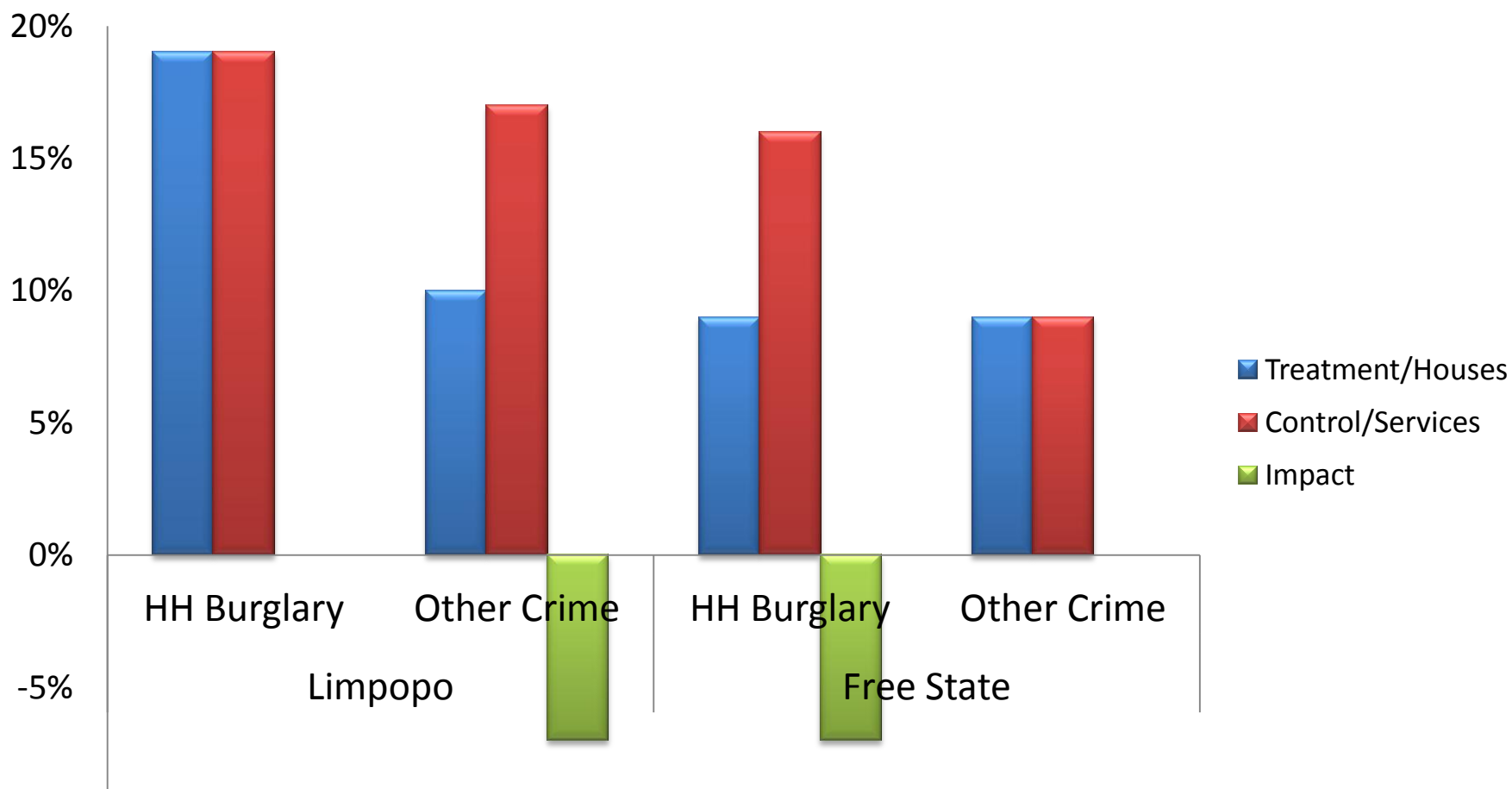
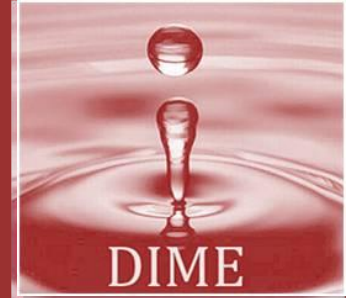


## RELOCATION



human settlements

Department:  
Human Settlements  
REPUBLIC OF SOUTH AFRICA

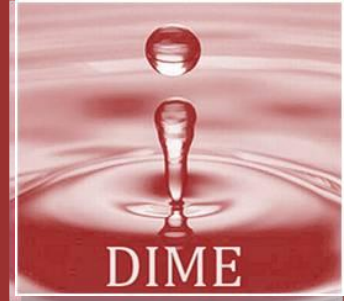


human settlements

Department:  
Human Settlements  
REPUBLIC OF SOUTH AFRICA

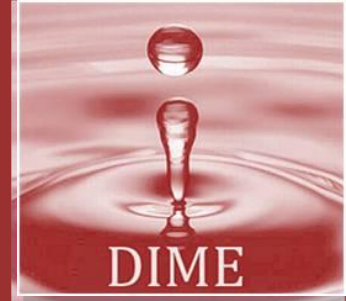


# Recommendation 4



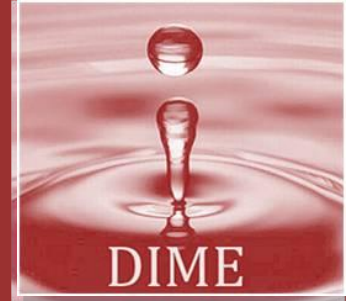
Incremental upgrading (especially the provision of electricity before top structures) should take special care to account for the potential of increased household burglaries resulting from asset accumulation

# Main Results



1. Child Health
2. Effects of Improved Tenure Security
3. Asset Accumulation
4. Crime
5. Household Sizes

# Household Size

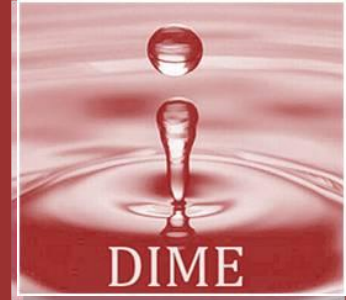


Little difference in Free State, but significantly larger HH sizes for unserviced houses (4.14) than serviced stands (3.65)

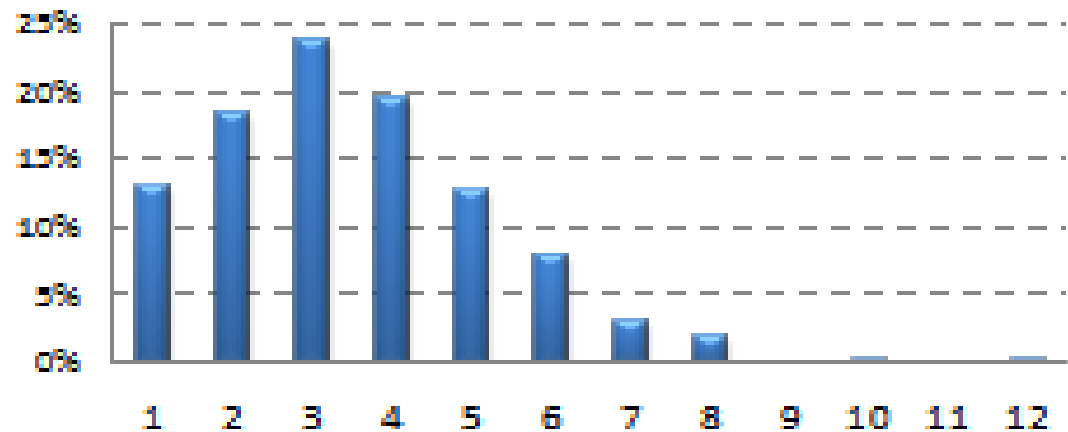
Impacts for relocation:

Indicator	Treatment	Control
HH size	3.86	1.84
Spouses staying with HH Head	85%	54%
Transfers as % of expenditure	2%	11%
% of HHs with children at house	65%	23%
% HHs getting child support grants	55%	34%

# Household Size (Cont.)

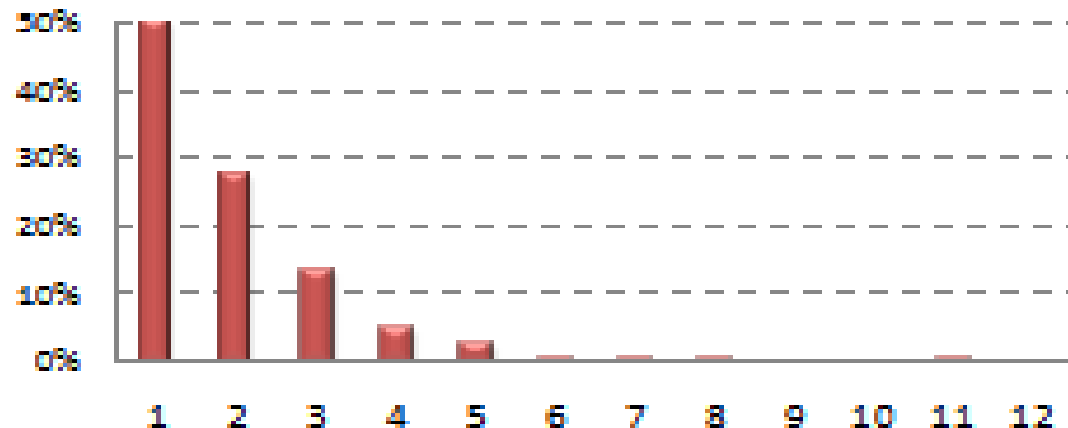


**TREATMENT**



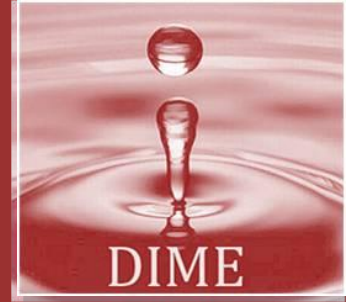
Household Size for Treatment Group

**CONTROL**

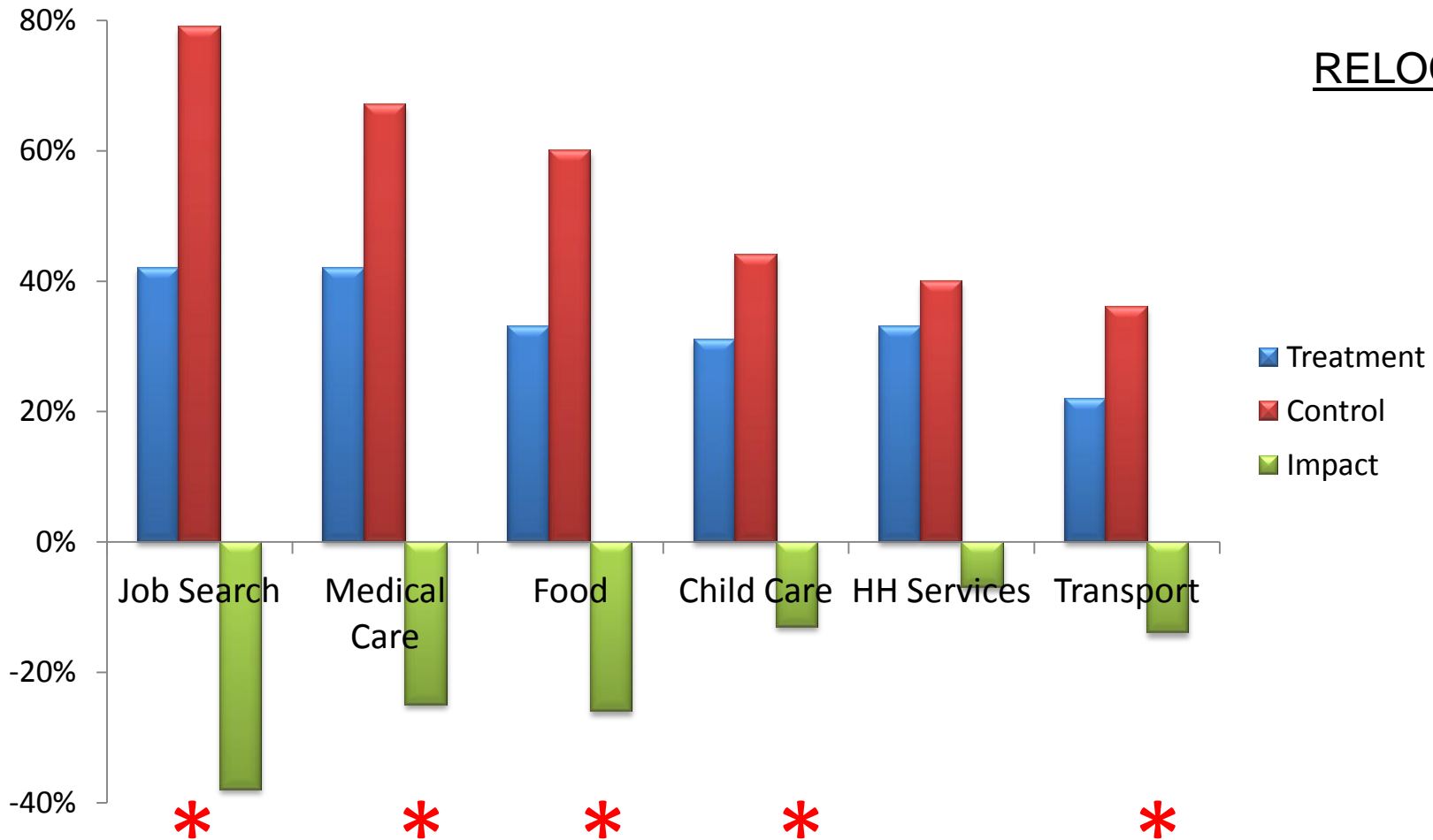


Household Size for Control Group

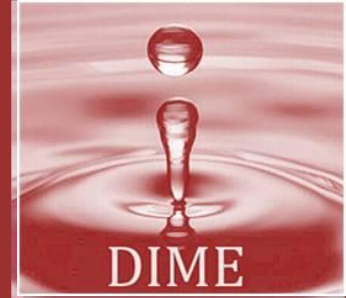
# Social Interactions: Reliance on Neighbors



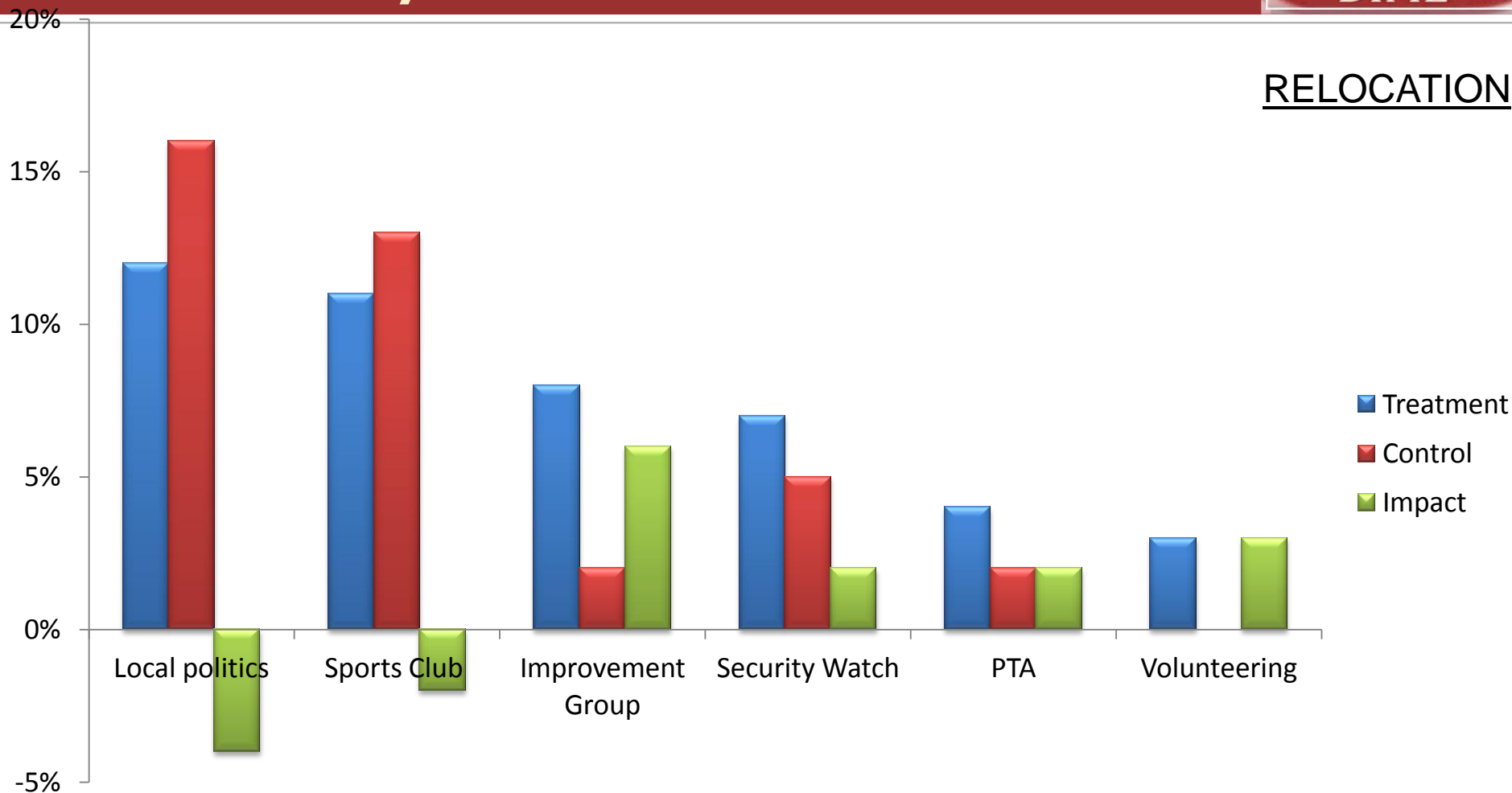
RELOCATION



# Social Interactions: Community Involvement



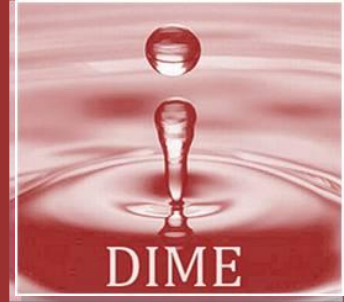
RELOCATION



human settlements

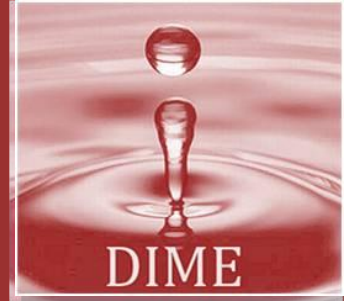
Department:  
Human Settlements  
REPUBLIC OF SOUTH AFRICA

# Recommendation 5:



Careful planning should be done to develop the required social amenities and estimate expected utility usage when upgrading a settlement to account not only for the *current* residents, but also the potential influx of *new* residents that join households as a direct result of upgrading interventions

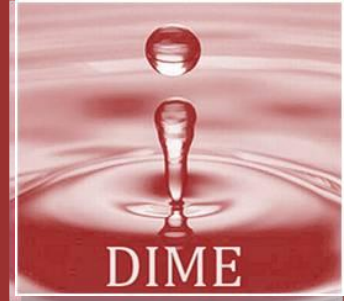
# Summary of Results



- The research has found strong program impacts in a number of areas including:
  - Household demographics and social cohesion
  - Asset accumulation and financial stability
  - Child health outcomes
  - Crime perceptions
  - Household upgrading and rental practices

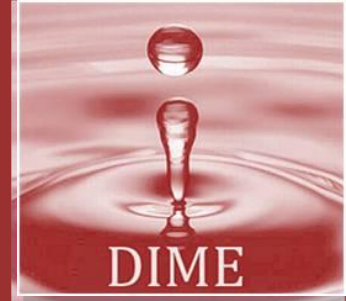


# Moving Forward



- So we have some numbers. What now...?
- These results are meant to stimulate debate and are not authoritative
- Further studies should build on this to guide future research, policy and implementation debate within an **evidence-based** framework

# Contacts



## Thank You

For more information:

IDB:

Sebastian Martinez: [SMartinez@iadb.org](mailto:SMartinez@iadb.org)

World Bank

Aidan Coville: [acoville@worldbank.org](mailto:acoville@worldbank.org)

Department of Human Settlements:

Phillip Chauke: [Phillip.Chauke@dhs.gov.za](mailto:Phillip.Chauke@dhs.gov.za)

Mulalo Muthige: [Mulalo.Muthige@dhs.gov.za](mailto:Mulalo.Muthige@dhs.gov.za)