



**The role of improved domestic water  
supply in livelihoods and poverty reduction  
in Limpopo Province,  
South Africa.**

***Hope, R. A.♣, Dixon, P-J.♥, & von Maltitz, G.♠***

**♣Centre for Land Use and Water Resources Research (CLUWRR),  
University of Newcastle, UK;**

**♥Department of Anthropology, University of Durham, UK;**

**♠CSIR-Environmentek, RSA.**

# Water – a key challenge for sustainable development



- *Catchment Management & Poverty Alleviation (CAMP).*
- *Water law in South Africa.*
- *Who are the poor in South Africa?*
- *Water and poverty linkages in rural communities.*
- *The role of kitchen gardens.*
- *Does improved water supply uplift the poor?*

# Catchment Management and Poverty Alleviation

- DFID funded (forestry research programme) international development project.
- Land use change, economics and livelihood impacts.
- Integrated analysis of bio-physical and socio-economic variables at catchment scale.
- Methodology to be validated in Tanzania and Grenada.
- Project end: Feb 2004.

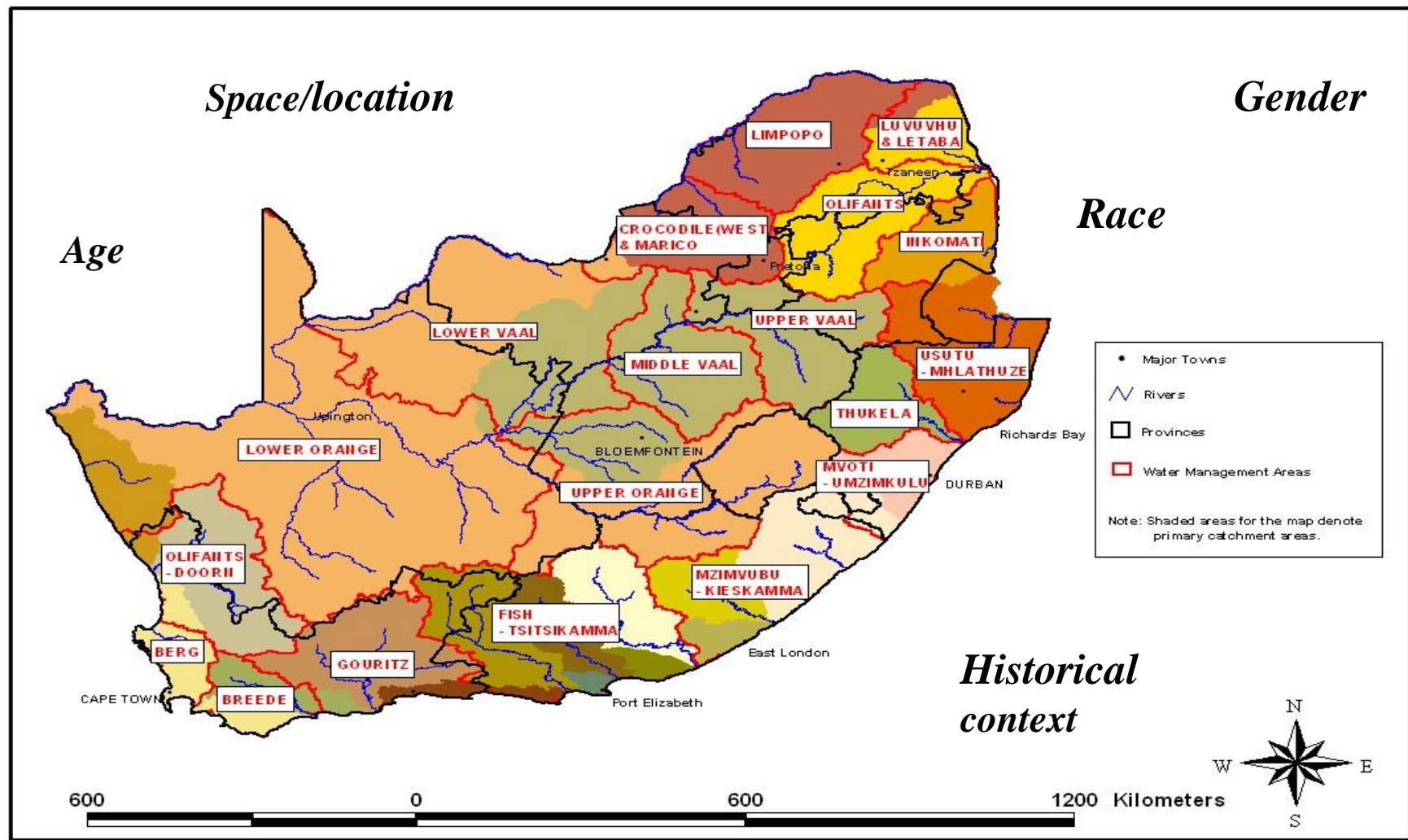


# Water law in South Africa



- National Water Act (1998)
- The *Reserve*
- “Indivisible national asset”
- Registration & licensing
- Free Basic Water Provision
- Cost recovery
- DWA as ‘regulator’
- Local capacity (WSA & WSP)
- CMAs and WUAs
- Does water policy reach the poor?

# Who are the poor in South Africa?



## Defining poverty

- Quantitative versus qualitative methods.
- Time.
- Gender, ethnicity, age, class.
- Identification and referencing problems.
- Integrating money-metric measures and individual understandings.



## Water and poverty linkages



- Consumptive uses (cooking, drinking, washing, bathing, laundry).
- Productive uses (include beer, dryland farming, irrigation, bricks, bakery, woodfuel, livestock, kitchen garden farming, woodland resources).
- Mediating access: institutions, culture, gender, policy, environment/location, capabilities, assets (or capitals).
- *Access to water does not equate with use of the resource.*
- Livelihood outcomes: health, income, well-being, poverty status, etc.

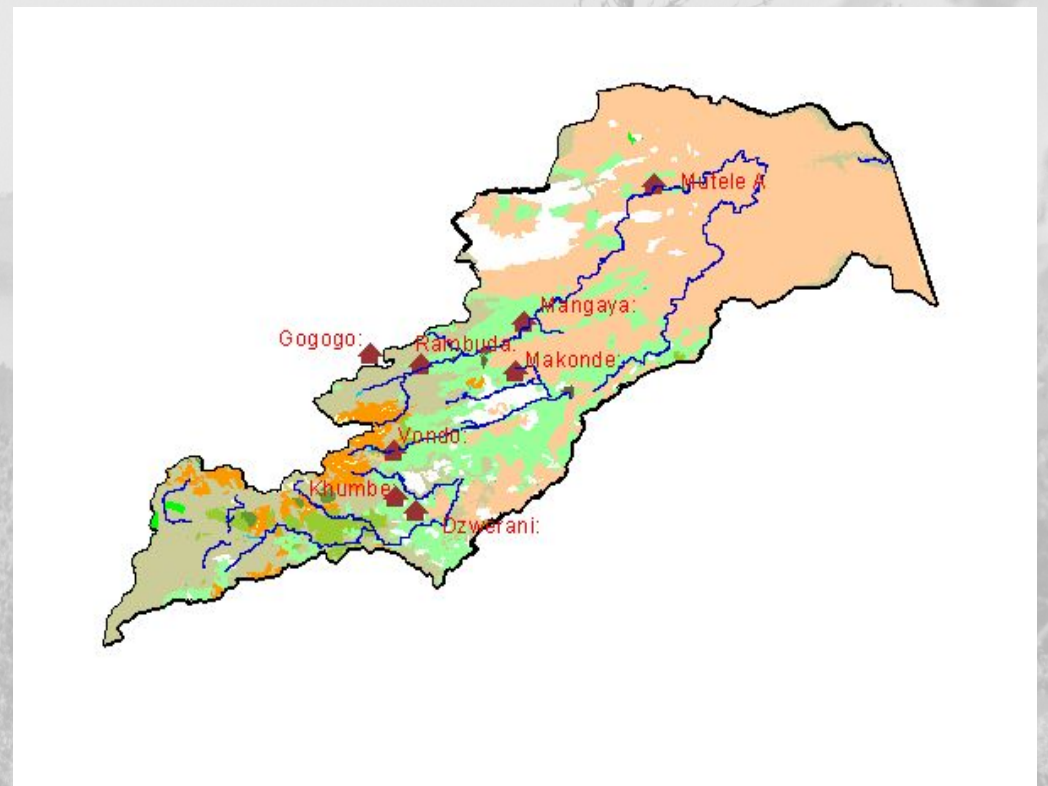
# Productive water and livelihoods typology

<i>Activity</i>	<i>Water leverage source</i>	<i>Livelihood group</i>	<i>Institutional, resource or policy influence</i>
Kitchen garden	Private tap	All groups	FBWP, cost recovery, connection fee, delivery
Brewing beer	Private tap/ river/borehole	Non-poor, women	Cultural norms, input prices, finance
Brick-making	Private tap/river	Unemployed, poor	State intervention, qualification criteria (qc)
Bakery	Private tap/river	Unemployed, poor	State intervention, qc
Livestock	River/springs	Non-poor, male	Land competition, drought, theft
Fuelwood	Rainfall regime	Female collection	State/Tribal bans, danger
Dryland farming	Rainfall regime	All groups	Land, markets, finance
Irrigated farming	River, groundwater	Non-poor, men or state scheme	Land, markets, finance, water
Woodland resources	Rainfall regime	All groups	Communal access, danger
Working for Water	Stream flow, MAR	Women, youth, poor	State intervention, qc
Small scale forestry	Rainfall regime (>800mm/pa)	Non-poor, men; traditional leaders	State intervention (1960s); policy clashes?

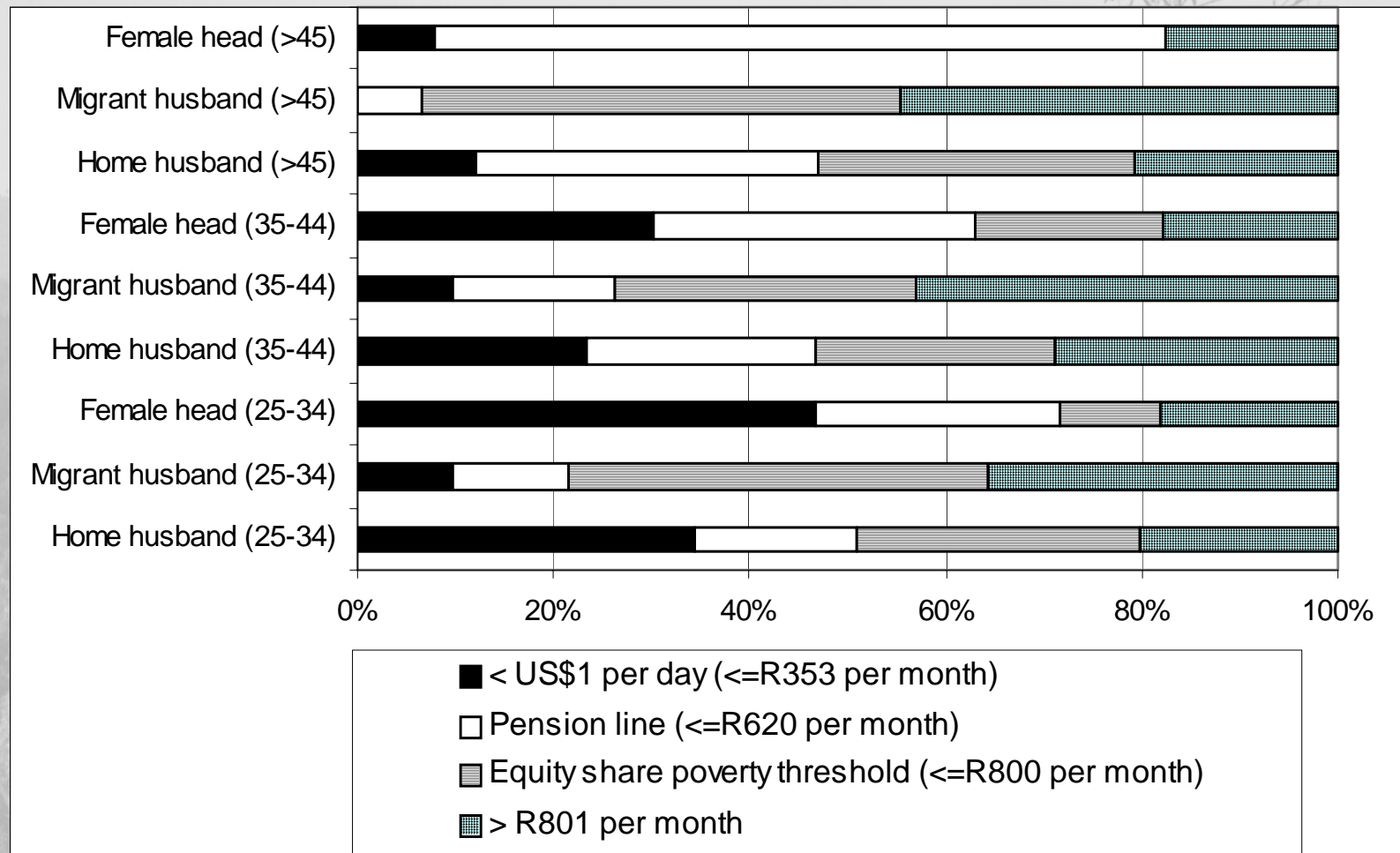


## Livelihoods sampling strategy

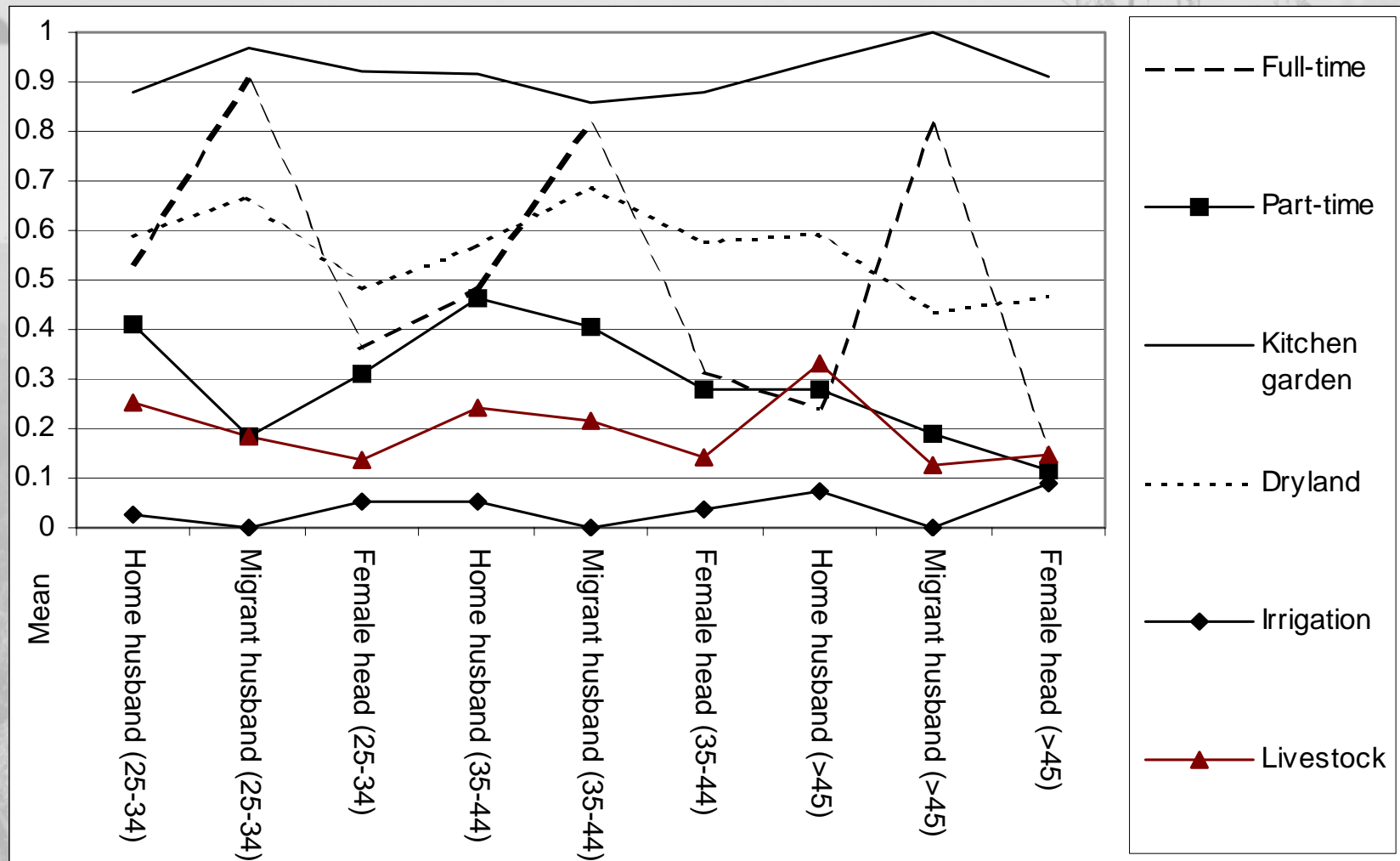
- Purposive, random sample of Luvuvhu catchment;
- Identified water variables:
  - i) rainfall (< or > 700mm/pa);
  - ii) reticulated supply;
  - iii) irrigation infrastructure
- Household unit of analysis
- 8 communities, n = 552
- Administered Jan 2002



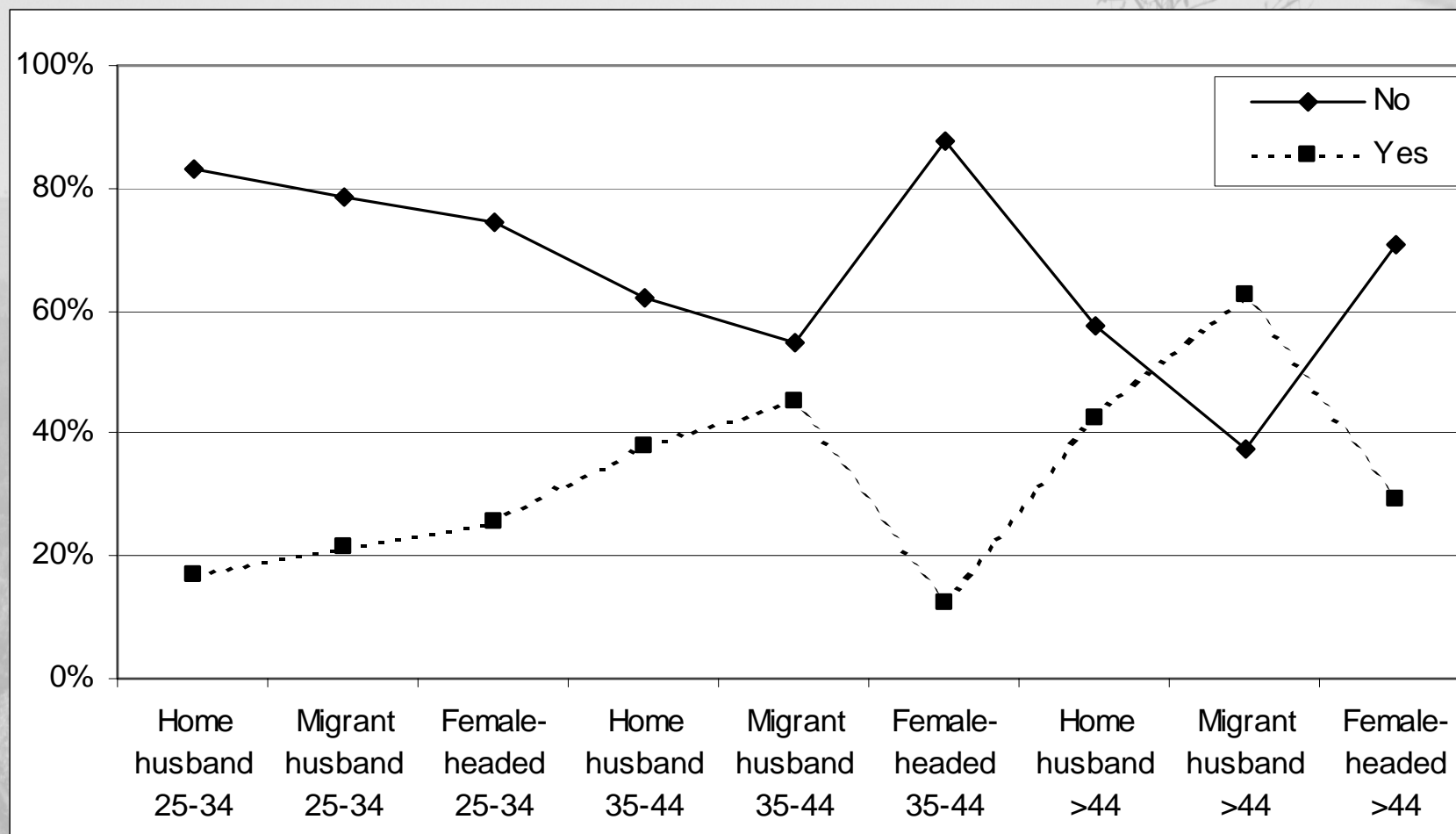
# Distribution of social cohorts by poverty lines



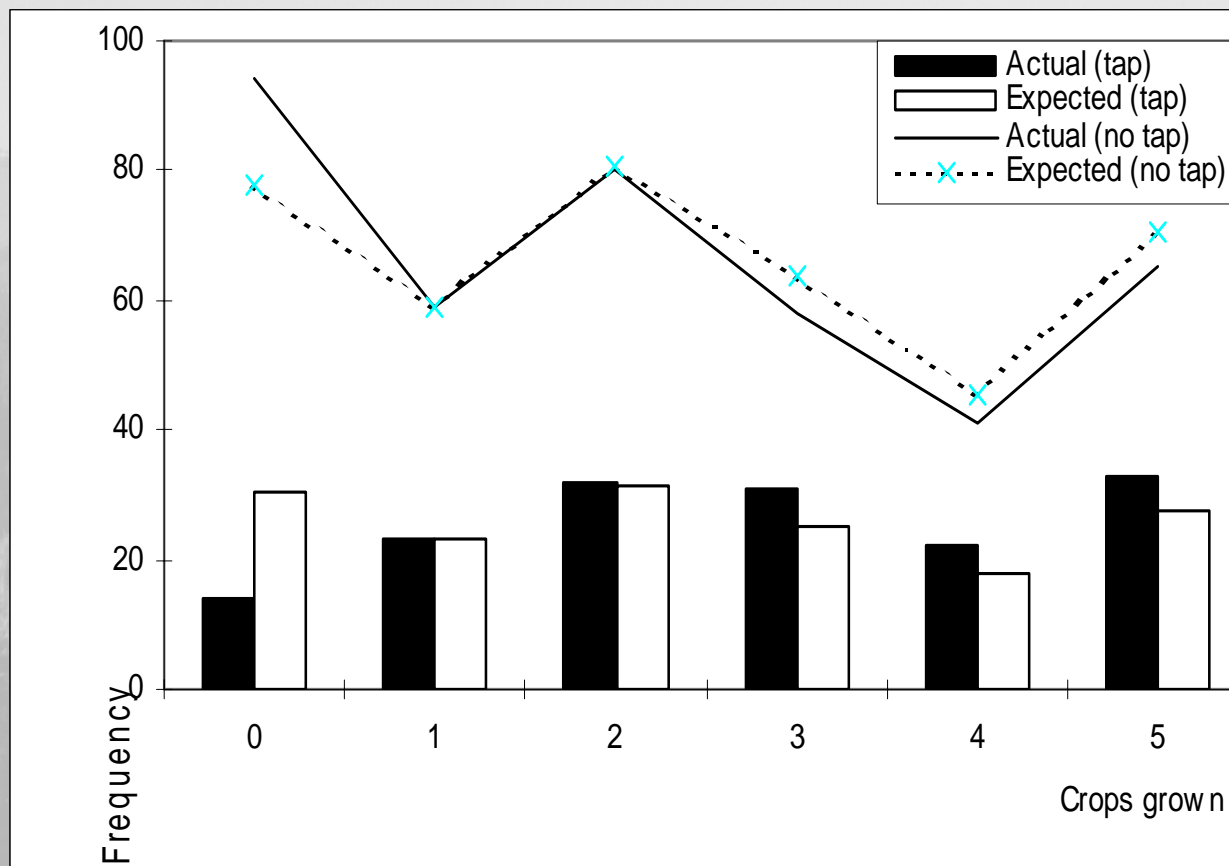
# Livelihood strategies by mean adult HH frequency



# Access to improved private water supply

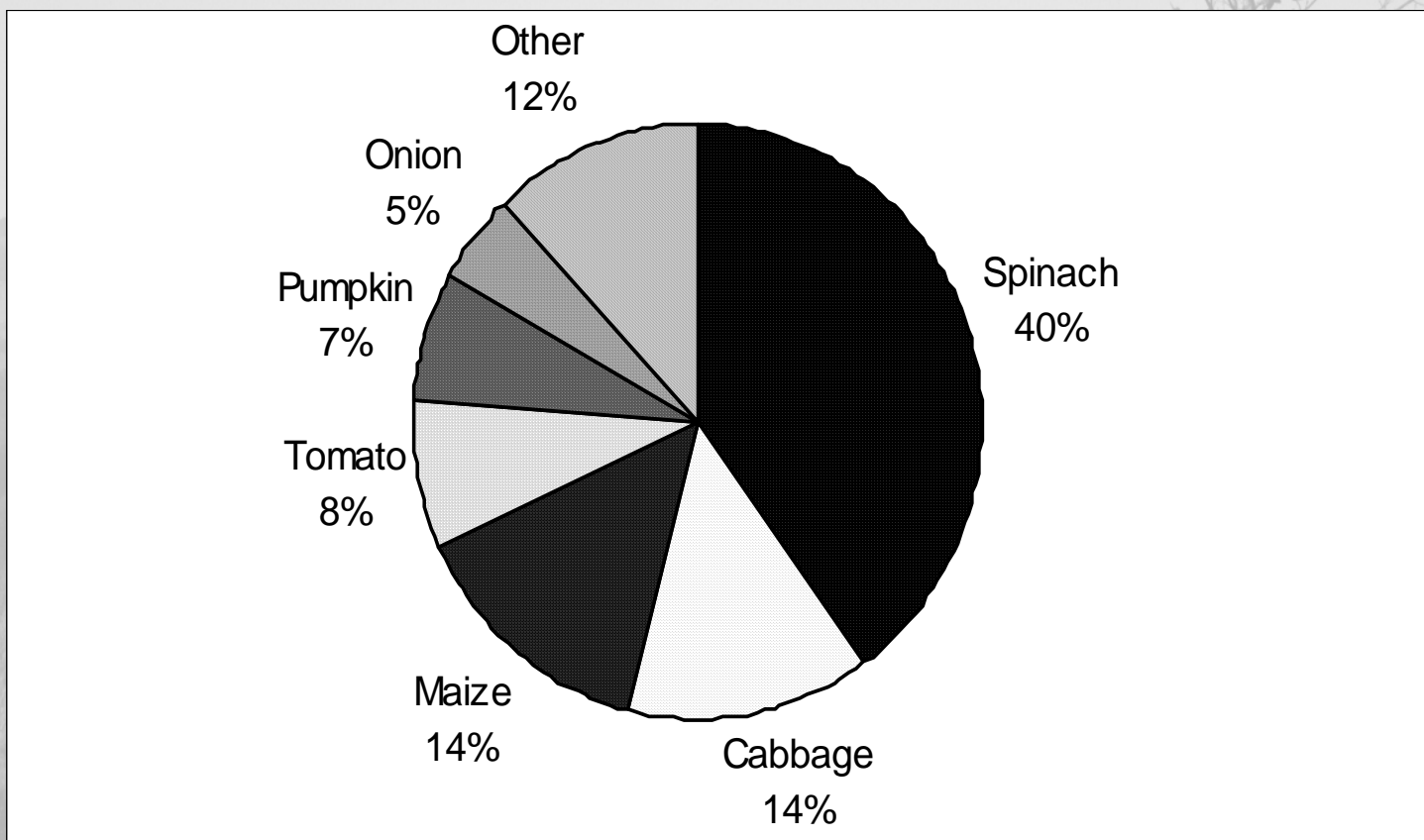


# Association between number of kitchen garden crops grown and access to HH water supply

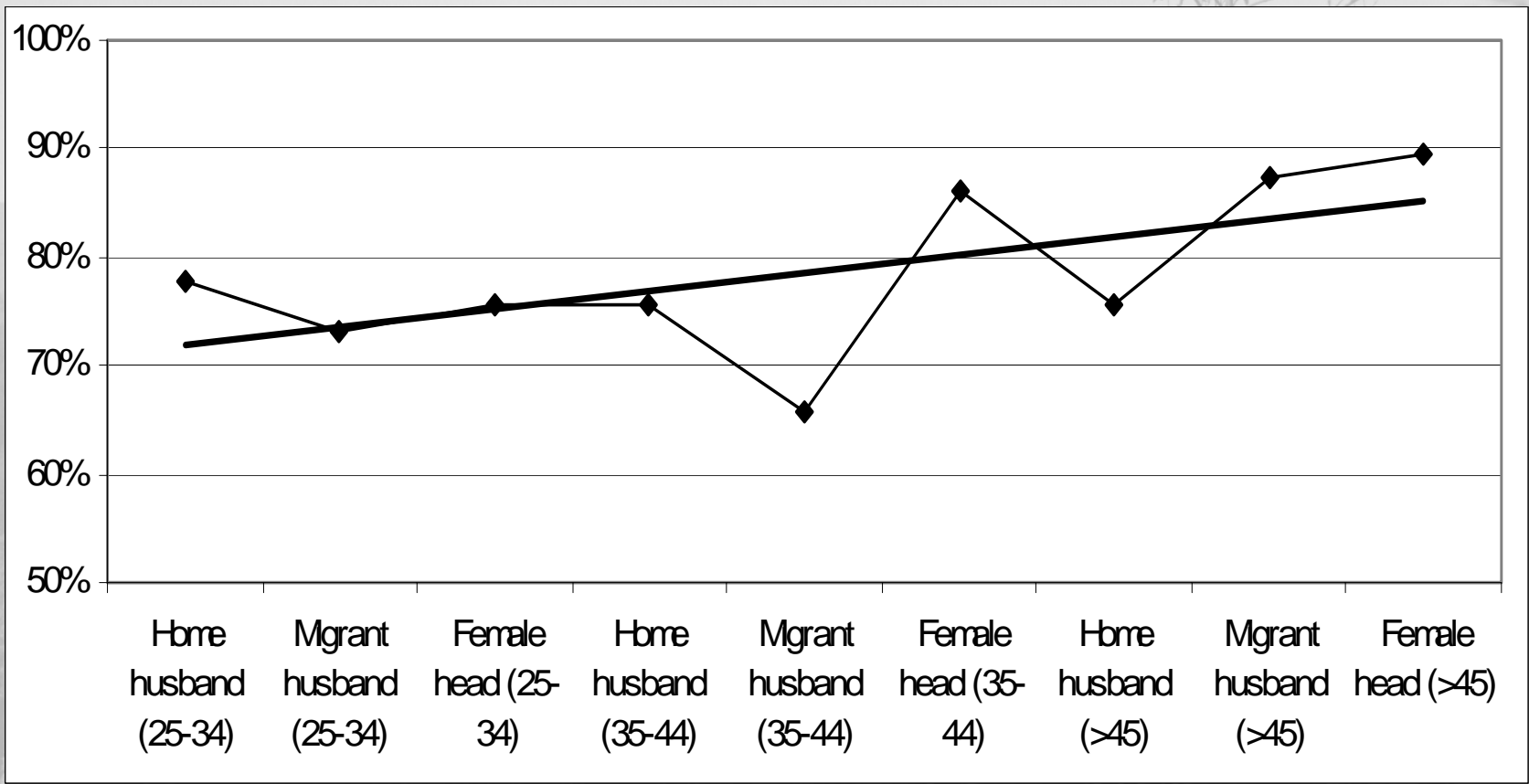


Positive and significant association  
( $P=17.22$ ;  $df=5$ ;  $p<0.01$ )

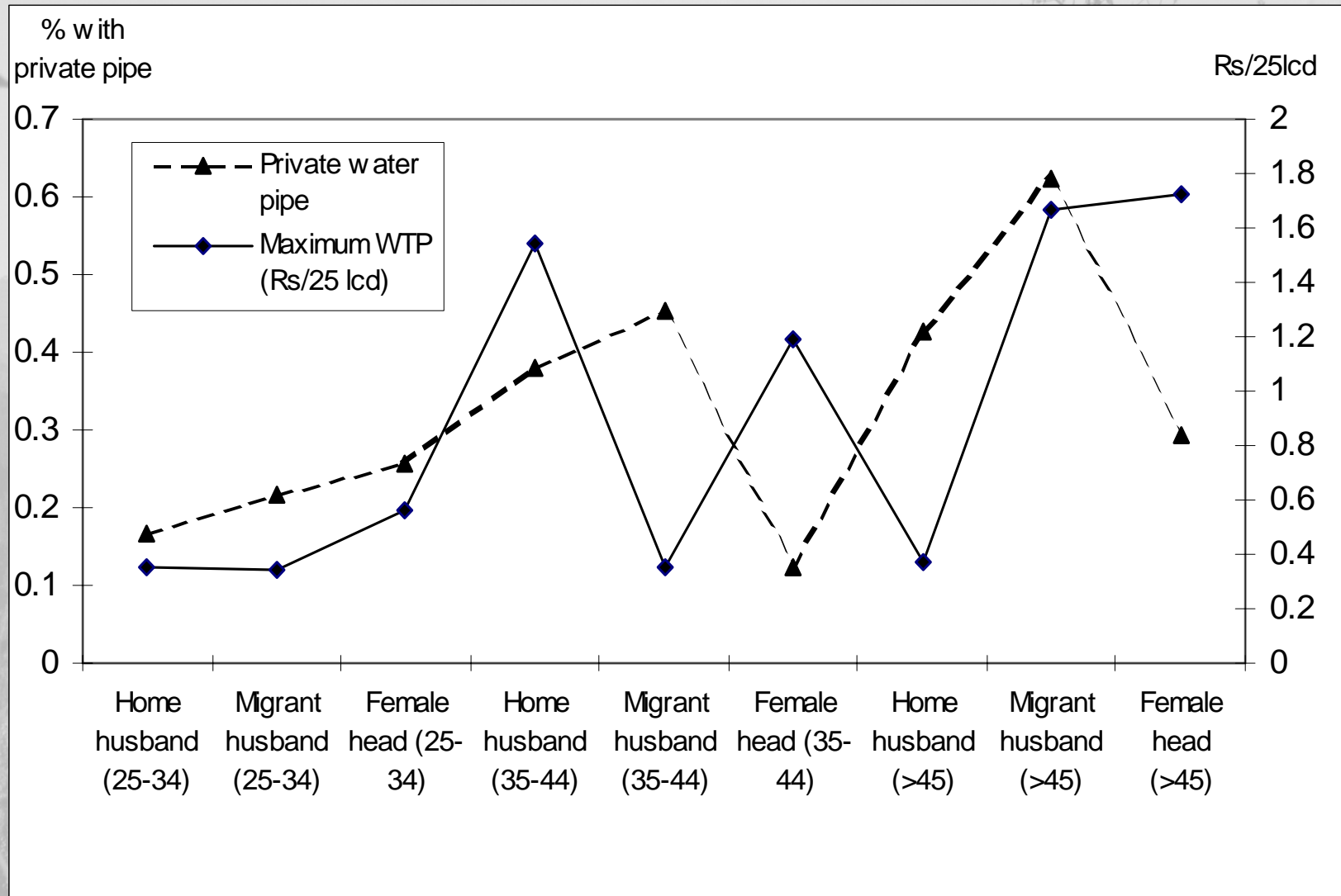
## Kitchen garden crops grown by HHs



# Percentage of 100% consumption of crops by cohorts

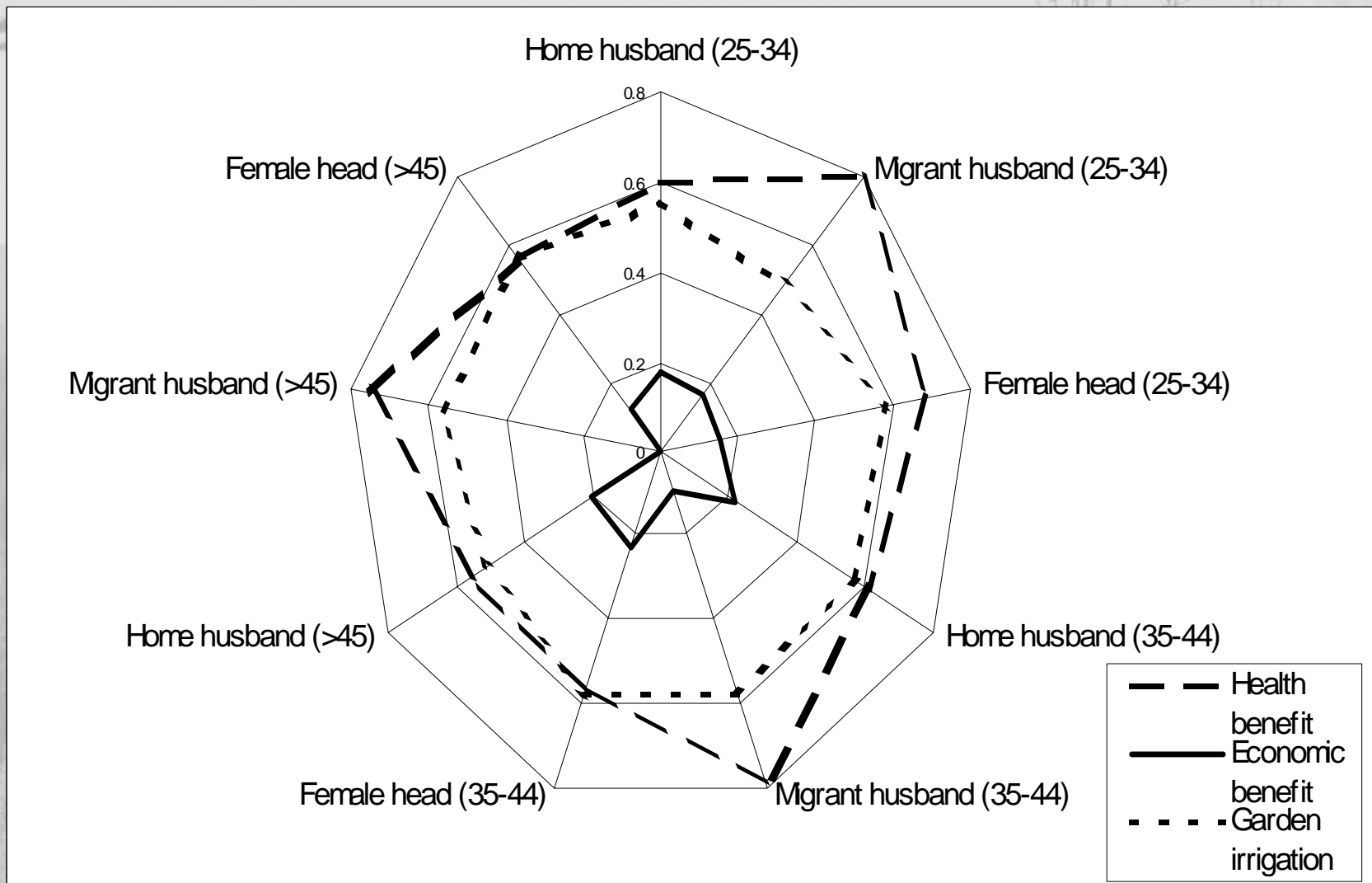


# Comparing current water delivery with WTP





# Stated benefits of an improved water supply



# Does improved water supply uplift the poor?



- Income poverty is more acute among younger HH cohorts (Female & Home husband)
- Evidence for ‘water for food’ benefits  
...but, inequitable delivery
- Limited wider productive uses of domestic water in Venda
- Food and health benefits reported as main gains from domestic water supply
- Institutions and local culture mediate opportunities and constraints within a historical context that is still in dispute/negotiation (land, authority)