



Ministry of Public Construction and National Housing

Zimbabwe National Coordinating Committee on Human Settlements



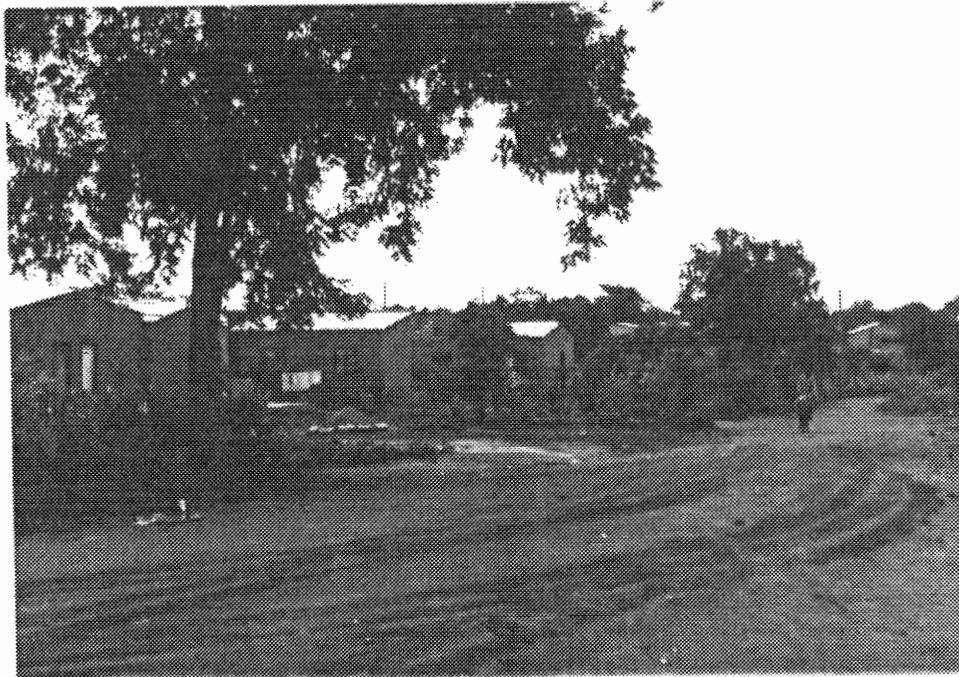
United States Agency for International Development/Zimbabwe

ZIMBABWE SHELTER AND URBAN INDICATOR STUDY  
REPORT OF FINDINGS

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*October 1995*

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**ZIMBABWE NATIONAL REPORT ON SHELTER AND URBAN INDICATORS**

*12 October 1995*

Prepared for:

**Ministry of Public Construction and  
National Housing, Government of Zimbabwe**

**Zimbabwe Coordinating Committee on Human Settlements**

**USAID/Zimbabwe**

Prepared by:

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## PREFACE

This study was commissioned by the Ministry of Public Construction and National Housing, Government of Zimbabwe, the Zimbabwe Coordinating Committee on Human Settlements and the United States Agency for International Development's Mission to Zimbabwe. The report was prepared by Colleen Butcher (team leader) of Plan Inc. Zimbabwe (Pvt) Ltd, Daniel Ncube of Burrow Binnie Zimbabwe Ltd., Luke Mabvudza of Plan Afric with assistance from Clever Ndlovu and Collins Manomano of Plan Inc. Zimbabwe (Pvt) Ltd.

The authors would like to express their appreciation for the assistance given by numerous agencies in the compilation of the data and in particular to Mr E. Tafangombe, Chairman of ZCCHS; Mr I.M. Magagula, Director of Housing and Community Services, City of Bulawayo; and Mr Juta, City Treasurer, City of Harare.

October 1995.

## ACRONYMS

CSO	:	Central Statistic Office, GOZ
GOZ	:	Government of Zimbabwe
MPCNH	:	Ministry of Public Construction and National Housing, GOZ
UNCHS	:	United Nations Centre for Human Settlements (Habitat)
USAID	:	United States Agency for International Development
ZCCHS	:	Zimbabwe Coordinating Committee on Human Settlements

*At the time of the Study, US\$1 = Z\$8.6*

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## EXECUTIVE SUMMARY

### MODULE 0 : BACKGROUND DATA

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
<p><b>D1.</b> Land use: <i>Surface of land (sq. km) in the urban agglomeration and/or in the metropolitan area.</i></p>	<p><b>Bulawayo:</b>            a) Residential: 301,6km<sup>2</sup>            b) Business: 17,9km<sup>2</sup>            c) Transport: 21,1km<sup>2</sup>            d) Recreation: 4,6km<sup>2</sup>            e) Vacant: 20,9km<sup>2</sup>            f) Water: 4,5km<sup>2</sup>            g) Other: 34,2km<sup>2</sup>  <b>Total 404,8km<sup>2</sup></b></p>
<p><b>D2.</b> Population: <i>Total population by sex in a) the city proper; b) the metropolitan area; c) the urban agglomeration; d) the country as a whole.</i></p>	<p><b>Municipal</b></p> <p><b>Harare:</b>            1982 Male: 453 138                  F/Male: 396 097            1992 Male: 768 050                  F/Male: 710 760  <b>Total: 1 478 810</b></p> <p><b>Bulawayo:</b>            1982 Male: 261 936                  F/Male: 233 381            1992 Male: 309 864                  F/Male: 311 878  <b>Total: 621 742</b>  <b>(907 000)</b></p> <p>1992            National: 10 412 548</p>
<p><b>D3.</b> Population growth rate: <i>Annual population growth rate.</i></p>	<p><b>City Growth Rate: 1982 - 1992</b>            Harare: 6.0%            Bulawayo: 7.0%            Bindura: 4.5%            Gwanda: 3.8%</p> <p><b>Natural Growth Rate:</b>            Harare: 3.13%            Bulawayo: 3.13%</p>

<b>D4.</b> Women headed households: <i>Total number of households headed by women.</i>	1992: Harare: 18.1% Bulawayo: 23.7%																																
<b>D5.</b> Average household size: <i>Average number of persons per household.</i>	1992: Harare: 4.06 Bulawayo: 4.25 National: 4.76																																
<b>D6.</b> Household formation rate: <i>Annual rate of growth of households.</i>	1992: Harare: 7.4% p.a Bulawayo: 2.5% p.a National: 3.6% p.a																																
<b>D7.</b> Household Income Distribution: <i>Percentage of households and average household income by quintiles.</i>	1992: Quintile 1: Z\$251 Quintile 2: Z\$503 Quintile 3: Z\$754 Quintile 4: Z\$1 006 Quintile 5: Z\$1 257																																
<b>D8.</b> City Product per person <i>The total city product for the year divided by population</i>	1990: Byo: US\$2518/person Hre: US\$2370/person																																
<b>D9.</b> Tenure type <i>Percentage of households in tenure categories at both city and national levels:</i>  Owner/purchaser: Tenant: Lodger: Tied accommodation: Other: Not specified:	1992: <table border="1"> <thead> <tr> <th></th> <th>Natnl.</th> <th>Hre</th> <th>Byo</th> </tr> </thead> <tbody> <tr> <td>Owner/purchaser:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Tenant:</td> <td>56.6</td> <td>30</td> <td>43.72</td> </tr> <tr> <td>Lodger:</td> <td>4.2</td> <td>7</td> <td>11.59</td> </tr> <tr> <td>Tied accommodation:</td> <td>14.5</td> <td>48</td> <td>34.88</td> </tr> <tr> <td>Other:</td> <td>20.5</td> <td>14</td> <td>8.94</td> </tr> <tr> <td>Not specified:</td> <td>1.5</td> <td>1</td> <td>0.86</td> </tr> <tr> <td></td> <td>0</td> <td>0</td> <td>0.01</td> </tr> </tbody> </table>		Natnl.	Hre	Byo	Owner/purchaser:				Tenant:	56.6	30	43.72	Lodger:	4.2	7	11.59	Tied accommodation:	14.5	48	34.88	Other:	20.5	14	8.94	Not specified:	1.5	1	0.86		0	0	0.01
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	0	0	0.01																														

**MODULE 1 : SOCIO-ECONOMIC DEVELOPMENT**

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
<p>1. Households below poverty line: <i>Percentage of households situated below the poverty line by gender of household head.</i></p>	Not available
<p>2. Informal/undeclared employment: <i>Percentage of the employed population whose activity is part of the informal sector.</i></p>	<p>1992: 9,99% 1993: 13,32% 1992: Male: 5,4% Female: 19,8% 1993: Male: 7,9% Female: 25,4%</p>
<p>3. Hospital beds: <i>Number of persons per hospital bed.</i></p>	<p>Byo: 263:1 (2819 beds) National (Urban &amp; Rural: 180:1)</p>
<p>4. Child mortality: <i>Proportion of children who die before reaching their fifth birthday by gender (1990-1994).</i></p>	<p>National Total: 77,2/1000 Male: 66 Female: 53 National Urban 10,1/1000</p>
<p>5. School classrooms: <i>Number of school children per classroom per school in a) primary schools; b) secondary schools.</i></p>	<p>Byo: Primary: 42 Secondary: 40</p>
<p>6. Crime rates: <i>Number of reported crime rates annually per 1000 population for a) murders; b) thefts.</i></p>	<p>National (Urban &amp; Rural) Murders: 95,9 Thefts: 17680 National Urban Not available</p>

## MODULE 2 : INFRASTRUCTURE

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
<p><b>Indicator 7 : Household connection levels</b>            Percentage of households connected to a) water b) sewerage c) electricity d) Telephones</p> <p>a) <u>Water</u> :</p> <p style="padding-left: 40px;"><i>Harare</i> 89%  <i>Bulawayo</i> 97%  <i>Gwanda</i> 45%  <i>Bindura</i> 94%  <i>Gutu-Mupandawana</i> 12,5%  <i>National (urban)</i> 81%  <i>National (urban &amp; rural)</i> 35%</p> <p>b) <u>Sewerage</u> :</p> <p style="padding-left: 40px;"><i>Harare</i> 93%  <i>Bulawayo</i> 98%  <i>Gwanda</i> 34%  <i>Bindura</i> 42%  <i>Gutu-Mupandawana</i> 10,9%  <i>National (urban)</i> 67%  <i>National (urban &amp; rural)</i> 37%</p> <p>c) <u>Electricity</u> :</p> <p style="padding-left: 40px;"><i>Harare</i> 64%  <i>Bulawayo</i> 92%  <i>Gwanda</i> 5%  <i>Gutu-Mupandawana</i> 11%  <i>National (urban)</i> 55%  <i>National (urban &amp; rural)</i> 28%</p> <p>d) <u>Telephones</u> :</p> <p style="padding-left: 40px;">Call boxes/1000 (Mbiba) Not available</p>	
<p><b>Indicator 8 : Access to Potable water</b>            Percentage of Households with access to Potable Water</p> <p style="padding-left: 40px;"><u>Harare</u> 97%  <u>Bulawayo</u> 100%  <u>National (urban)</u> 99%  <u>National (urban &amp; rural)</u> 56%</p>	



### MODULE 3 : TRANSPORTATION

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUES
<p>Indicator 11 : Modal Split  <i>Proportion of work trips undertaken by a) Private car, b) Train, c) Bus or minibus, d) Motorcycle, e) bicycle, f) walking, g) other</i></p>	
<p style="text-align: center;"><u>Urban</u></p> <p><i>Private car</i></p> <p><i>Train</i></p> <p><i>Bus or minibus</i></p> <p><i>Motorcycle</i></p> <p><i>Bicycle</i></p> <p><i>Walk</i></p> <p><i>Other (emergency taxi etc)</i></p>	<p>22,9%</p> <p>0%</p> <p>47,8%</p> <p>0%</p> <p>5,3%</p> <p>6,0%</p> <p>18%</p>
<p style="text-align: center;"><u>National</u></p> <p><i>Private car</i></p> <p><i>Train</i></p> <p><i>Bus or minibus</i></p> <p><i>Motorcycle</i></p> <p><i>Bicycle</i></p> <p><i>Walk</i></p> <p><i>Other (emergency taxi etc)</i></p>	<p>9,8%</p> <p>0%</p> <p>17,4%</p> <p>0%</p> <p>2,8%</p> <p>61,7%</p> <p>8,3%</p>

Proportion of Work Trips undertaken by

	Men		Women		All	
	a Urban	b National	c Urban	d National	a + c Urban	b + d National
a) Private car	15,3%	6,6%	7,6%	3,2%	22,9%	9,8%
b) Train	--	--	--	--	--	--
c) Bus or Minibus	36%	13,1%	11,8%	5,6%	47,8%	17,4%
d) Motorcycle	--	--	--	--	--	--
e) Bicycle	5,0%	2,6%	0,3%	0,2%	5,3%	2,8%
f) Walking	3,3%	34,2%	2,7%	27,5%	6,0%	61,7%
g) Other	11,2%	5,2%	6,8%	3,1%	18%	8,3%

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUES
<p>Indicator 12 : Travel Time</p> <p><i>The average time in minutes for a work trip</i></p>	56,1 minutes
<p>Indicator 13 : Expenditure on road infrastructure</p> <p><i>Defined as per-capita expenditure in US Dollars on roads (three year average)</i></p> <p style="text-align: center;"><u>Harare</u> <u>Bulawayo</u></p>	US\$7,87/capita US\$7,44/capita
<p>Indicator 14: Automobile Ownership</p> <p><i>Defined as the ratio of automobiles to 1000 population.</i></p> <p style="text-align: center;"><u>Bulawayo</u> (automobiles/1000 population)</p>	81

**MODULE 4 : ENVIRONMENTAL MANAGEMENT**

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
<p>Indicator 15: Percentage of waste water treated. <i>Percentage of all wastewater undergoing some form of treatment.</i></p> <p style="text-align: center;"><u>Harare</u>  <i>Central Treatment Works</i> 93%  <i>Individual Septic Tanks</i> 79%  14%</p> <p style="text-align: center;"><u>Bulawayo</u>  <i>Central Treatment Works</i> 98%  <i>Individual Septic Tanks</i> 84%  14%</p> <p style="text-align: center;"><u>National (Urban)</u>  95%</p>	
<p>Indicator 16: Solid waste Generated  <i>Solid waste generated per person in cubic metres and tonnes per annum</i></p> <p style="text-align: center;"><u>Harare</u>  0,79m<sup>3</sup>  <u>0,24 tonnes</u></p> <p style="text-align: center;"><u>Bulawayo</u>  0,61m<sup>3</sup>  <u>0,18 tonnes</u></p> <p style="text-align: center;"><u>National urban Value</u>  0,70m<sup>3</sup>  0,21 tonnes</p>	

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUES
<p>Indicator 17: Disposal methods for solid waste  <i>Proportion of solid waste by weight disposed 10 : a) sanitary landfill, b) incinerated, c) open dump, d) recycled e) other</i></p> <p style="text-align: center;"><u>Harare</u></p> <p>a) Sanitary landfill 92%  b) Incinerated 1%  c) Open dump (illegal)<sup>1</sup> 0%  d) Recycled 5%  e) Other 2%</p> <p style="text-align: center;"><u>Bulawayo</u></p> <p>a) Sanitary landfill 90%  b) Incinerated 1%  c) Open dump (illegal) 2%  d) Recycled 4%  e) Other 3%</p> <p style="text-align: center;"><u>National (Urban)</u></p> <p>a) Sanitary landfill 91%  b) Incinerated 1%  c) Open dump (illegal) 1%  d) Recycled 5%  e) Other 3%</p>	
<p>Indicator 18: Regular solid waste collections</p> <p><i>Proportion of households enjoying regular waste collection</i></p> <p style="text-align: center;"><u>Harare</u> 100%  <u>Bulawayo</u> 90%  <u>Gwanda</u> 100%  <u>Bindura</u> 86%  <u>Gutu-Mupandawana</u> 9,6%  <u>National (urban)</u> 95%</p> <p><i>Median number of times per month waste is collected</i></p> <p style="text-align: center;"><u>Harare</u> 4  <u>Bulawayo</u> 4</p>	

<sup>1</sup>: Although illegal dumping does take place, waste is subsequently collected by the City and removed to a landfill site.

**MODULE 5 : LOCAL GOVERNMENT**

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
<p><b>20.1.</b> Local Government per capita income:  <i>Total local government sources of funds (in US\$) annually, both capital and recurrent for the metropolitan area divided by population (three years average).</i></p>	<p>Harare: Z\$ 479,68            (US\$ 70,03)</p>
<p><b>20.2.</b> Major sources of income:  <i>Percentage of local government income by source:</i></p> <ul style="list-style-type: none"> <li>a) Taxes (Rate &amp; supple c)</li> <li>b) User-charges</li> <li>c) Rents</li> <li>d) Water sales</li> <li>e) Other/loans</li> </ul>	<p><b>Harare:</b></p> <ul style="list-style-type: none"> <li>30%</li> <li>13%</li> <li>8%</li> <li>32%</li> <li>17%</li> </ul>
<p><b>21.</b> Per capita capital expenditure:  <i>Capital expenditure (in US\$), by all local governments in the metropolitan area, averaged over the last three years per person.</i></p>	<p>1992/93 - 1994/95            Harare: Z\$428,80            (US\$ 62,60)</p>
<p><b>22.</b> Debt service charge ratio:  <i>Total principal and interest repaid, including bond maturations, as a percentage of total expenditure by local governments.</i></p>	<p>Bulawayo: 9,8%            Harare: 55% (22%)</p>
<p><b>23.</b> Local government employees:  <i>Total local government employees per 1000 population.</i></p>	<p><u>1995:</u>            Bulawayo: 7500                      = 8,27/1000                      (10,13/1000)            Harare: 10 500                      = 5,6/1000                      (8,2 prior to                      City Marketing                      privatisation)</p>

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUES
<p>24. Personnel expenditure ratio: <i>Proportion of recurrent expenditure spent on wage costs.</i></p>	<p>1995: Harare: 52% Bulawayo: 35% Bindura 28.8% Gwanda 30% Kwekwe 32%</p>
<p>25. Contracted recurrent expenditure ratio: <i>Proportion of recurrent expenditure spent on contracted activities.</i></p>	<p>0.04%</p>
<p>26. Government level providing services</p> <ul style="list-style-type: none"> <li>- Water</li> <li>- Sewerage</li> <li>- Refuse collection</li> <li>- Electricity</li> <li>- Telephone</li> <li>- Public transport</li> <li>- Fire/ambulance</li> <li>- Road maintenance</li> <li>- Education</li> <li>- Health care</li> <li>- Public housing</li> <li>- Recreation/sports</li> </ul>	<p>la (bulk:cg) la la la/s pub cg cg/pvt la/pvt. la la/cg/pvt la/cg/pvt la/cg/pvt la/cg/pvt</p>
<p>27. Control by higher levels of government:</p>	<p>Some</p>

**MODULE 6 : HOUSING AFFORDABILITY AND ADEQUACY**

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
<p>H1. House price to income ratio: <i>Ratio of the median free-market price of a dwelling unit and the median annual household income.</i></p>	<p>1992: 7,3 1994: 6,6</p>

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<p><b>HA31. Construction price and cost:</b>  <i>Present replacement cost (i.e. new dwelling unit) (labour, materials, on-site infrastructure, management and contractor profits) per sq. metre of a median priced dwelling unit.</i></p>	<p><u>1992:</u>  Z\$ 24 527 (P)  Z\$ 20 944 (C)  <u>1994:</u>  N/A (P)  Z\$ 22 847 (C)</p>
<p><b>Down-Market Penetration:</b>  <i>Ratio of lowest priced (unsubsidized) formal dwelling unit produced by the private sector (not less than 2% of annual housing production) and the median annual household income.</i></p>	<p>1992: 2,7  1994: 3.1</p>
<p><b>H2. House rent-to-income ratio:</b>  Ratio of median annual rent of a dwelling unit and the median annual household income of renters.</p>	<p><u>1994:</u>  Harare: 0,44</p>
<p><b>H3. Floor area per person:</b>  Median usable living space per person (m<sup>2</sup>).</p>	<p>Median owner h/holds - 8m<sup>2</sup>  median lodger h/holds - 3m<sup>2</sup></p>
<p><b>H4. Permanent Structures:</b>  Percentage of housing units located in structures expected to maintain their stability for 20 years or longer under local conditions with normal maintenance.</p>	<p><u>1993:</u>  National urban: 94,4%  <u>1992:</u>  Harare: 87,8%  Bulawayo: 96,8%</p>
<p><b>H5. Housing in Compliance:</b>  <i>Percentage of total housing stock in compliance with the current regulations.</i></p>	<p><u>1992:</u>  Harare: 87,8%  Bulawayo: 96,8%</p>

**MODULE 7 : HOUSING PROVISION**

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE															
<b>H6.</b> Land development multiplier: <i>Average ratio between the median land price of a developed plot at the urban fringe in a typical subdivision and the median price of raw, undeveloped land with planning approval in an area currently being developed.</i>	1,60 (medium income area only)															
<b>H7.</b> Infrastructure Expenditure: <i>Ratio of the total expenditures (operations, maintenance and capital) by all levels of government on infrastructure services during the current year, and the urban population.</i>	Harare (excluding parastatals) US\$ 69,50/capita Roads: 13% Sewerage: 7% Water: 27% Waste Mgt: 4% Health: 14%															
<b>H8.</b> Mortgage to credit ratio: <i>Ratio of total mortgage loans to all outstanding loans in both commercial and government financial institutions.</i>	1992: 77,32% 1993: 59,74%															
<b>H9.</b> Housing Production (Low income): <i>Total number of housing units (in both the formal and informal sectors) produced in the previous year per 1000 population.</i>	<table border="1"> <thead> <tr> <th></th> <th>1992</th> <th>1993</th> </tr> </thead> <tbody> <tr> <td>Harare</td> <td>0.45</td> <td>n/a</td> </tr> <tr> <td>Bulawayo</td> <td>0.40</td> <td>n/a</td> </tr> <tr> <td>Mutare</td> <td>3.03</td> <td>1.24</td> </tr> <tr> <td>Bindura</td> <td>0.33</td> <td>1.67</td> </tr> </tbody> </table>		1992	1993	Harare	0.45	n/a	Bulawayo	0.40	n/a	Mutare	3.03	1.24	Bindura	0.33	1.67
	1992	1993														
Harare	0.45	n/a														
Bulawayo	0.40	n/a														
Mutare	3.03	1.24														
Bindura	0.33	1.67														
<b>Stand Production (Low income):</b> <i>Number of stands that are serviced and ready for sale to less-than-median income families per 1000 population.</i>	<table border="1"> <thead> <tr> <th></th> <th>1992</th> <th>1993</th> </tr> </thead> <tbody> <tr> <td>Harare</td> <td>1.08</td> <td>0.89</td> </tr> <tr> <td>Bulawayo</td> <td>6.72</td> <td>2.39</td> </tr> <tr> <td>Mutare</td> <td>2.29</td> <td>6.99</td> </tr> <tr> <td>Bindura</td> <td>0.00</td> <td>0.00</td> </tr> </tbody> </table>		1992	1993	Harare	1.08	0.89	Bulawayo	6.72	2.39	Mutare	2.29	6.99	Bindura	0.00	0.00
	1992	1993														
Harare	1.08	0.89														
Bulawayo	6.72	2.39														
Mutare	2.29	6.99														
Bindura	0.00	0.00														
<b>H10.</b> Housing Investment: <i>Total investment in housing (in both the formal and informal sectors) as a percentage of gross domestic product.</i>	<u>1990:</u> Harare: 4,22% Bulawayo: 2,68%															

## MODULE 8 : HOUSING FINANCE

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
<b>HF1.</b> Mortgage to deposit difference: <i>Difference between mortgage rate and one year deposit rate.</i>	<u>National:</u> 1991/92: 9,98% 1992/93: 18,17%
<b>HF2.</b> Credit to Value ratio: <i>Ratio of mortgage loans to total housing investment (in both the formal and informal sector).</i>	<u>Harare:</u> 1992/93: 32,5% <u>Bulawayo:</u> 1992/93: 130,0%

## MODULE 9 : REGULATORY AUDIT

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
<b>RA1.</b> Permit approval times: <i>The median length in months to obtain approvals, permits and titles for a medium sized (50-200 unit) residential subdivision in an area on the urban fringe where residential development is permitted.</i>	<u>Harare:</u> 1992            41,65 <u>Bulawayo:</u> 1992            35,75 <u>Mutare:</u> 1992            38,15 <u>Bindura:</u> 1992            45,65
<b>RA2.</b> Public land ownership: <i>The estimated percentage of total land in the metropolitan area that is owned by public agencies.</i>	<u>1994:</u> Kwekwe:        69% Bindura:        52% Masvingo:      30% Average:        50,3%

## PART A: BACKGROUND

### I. ZIMBABWE URBAN AND HOUSING INDICATORS STUDY BACKGROUND

The United Nations Conference on Human Settlements (Habitat II) will be held in Istanbul in April 1996. The Conference has been called to:

- (i) ... *arrest the deterioration of human settlements and ultimately create the conditions for achieving improvements in the living environment of all people on a sustainable basis; and*
- (ii) ... *adopt a general statement of principles and commitments and formulate a related global plan of action capable of guiding national and international efforts through the first two decades of the next century.*

As part of the preparatory process of the Conference, all countries (developing and developed) will examine and appraise their shelter and urbanisation problems on a comparative basis through the use of a common set of urban and housing indicators. The indicators will form the underlying structure of country's reports for the Habitat II Conference and will help countries establish standards of performance and international comparison of policy outcomes.

The Zimbabwe Shelter and Urban Indicators Study has been jointly commissioned by the Government of Zimbabwe's Ministry of Public Construction and National Housing, the Zimbabwe Coordinating Committee on Human Settlements and the United States Agency for International Development's Mission to Zimbabwe.

The objectives of the study are to assist the Government of Zimbabwe to design and implement a National Shelter and Urban Indicators Programme to serve as the basis for monitoring and evaluating its programmes and activities in these sectors; to analyse policies in the housing sector; and to provide an input for the government's presentation to the UN Conference on Human Settlements (Habitat II) in Istanbul in 1996.

The study has comprised two phases. Phase 1 provided direct assistance to the MPCNH and the ZCCHS to select an appropriate set of urban and shelter indicators on which data was to be collected and further analysed. The Phase 1 Report (submitted) consists of an Indicator Selection Report which led into a proposed Data Collection Plan. A summary of the Data Collection Plan is included in Part A of this report.

Phase 2 of the study comprised the actual collection of data from local authorities and secondary sources and an analysis of the findings. The findings and analysis of the indicators are presented in Part B of this Report.

## 2. INDICATOR SELECTION CRITERIA

The Zimbabwe Coordinating Committee on Human Settlements (ZCCHS) identified all 47 Key Urban and Housing Indicators for collection. The Key Indicators are grouped into eight modules, viz:

- Module 0: Background data (9 indicators)
- Module 1: Socio-Economic development (6 indicators)
- Module 2: Infrastructure (4 indicators)
- Module 3: Transportation (4 indicators)
- Module 4: Environmental Management (5 indicators)
- Module 5: Local Government (9 indicators)
- Module 6: Housing affordability and adequacy (5 indicators)
- Module 7: Housing provision (5 indicators)

In addition, a further seven indicators have been selected, grouped into two additional modules which it is believed, provide greater clarity to understanding the shelter delivery process in Zimbabwe:

- Module 8: Housing Finance
- Module 9: Regulatory Audit.

The criteria applied for selecting an appropriate set of indicators were:

- (i) Applicability to the Zimbabwean situation. The full set of UNCHS/World Bank Extensive Survey indicators were developed for global application and some of the indicators are of little significance to the particular operating environment in Zimbabwe. For example, indicators which assume a high degree of private sector involvement in the production of housing; those which examine constraints imposed through rent control; those reflecting natural and man-made disasters have little relevance at this time.
- (ii) Policy interest indicators which reflect any of a number of areas in which Government of Zimbabwe policy has been developed in the past five years were weighted favourably for inclusion. Areas of particular policy interest in Zimbabwe include:
  - affordability
  - flexibility and strengthening of financial institutions involved in the housing sector
  - barriers to private sector involvement
  - the operating regulatory environment and the constraints that it imposes.

- (iii) Availability, accuracy and reliability of data from secondary sources which were used to measure the indicators.

Throughout the data collection phase, where possible, data has been *disaggregated by gender* so as to highlight gender discrepancies. However a lack of gender specific data for many indicators has been encountered.

The UNCHS/World Bank Indicators Programme recommends that the 27 urban indicators should be collected at city level for at least one city and that the 10 housing indicators be collected at national level). In Zimbabwe, an estimated 70 percent of the urban population lives in Harare and Bulawayo. Therefore the *geographic coverage* for collection of all the urban indicators was done by means of direct interviews with City of Harare and City of Bulawayo officials. The national urban values provided for various indicators in this Report are based on Harare and Bulawayo figures.

In addition, a limited number of the indicators was collected from selected secondary urban centres by means of a local authority self-administered questionnaire. The purpose of the latter data was to provide anecdotal comparisons with the national (Harare and Bulawayo) trends.

Questionnaires were sent to at least one centre in every province with the size of centres ranging from a city to a rural growth point. Replies were received from:

- \* Bindura - a provincial capital in Mashonaland Central province with a population of 21 167 people;
- \* Gutu-Mupandawana - a rural growth point in Masvingo province with a population of 15 596 people;
- \* Gwanda - a provincial capital in Matabeleland South province with a population of 10 565 people;
- \* Kwekwe - a municipality in Midlands province with a population of 68 000 people; and
- \* Masvingo - a municipality in Masvingo province with a population of 51 743 people.

### 3. DATA COLLECTION PLAN

The main data sources for the study were interviews with officials of Harare and Bulawayo City Councils, self-administered questionnaires sent to secondary urban centres and secondary source material, principally the Central Statistical Office. Wherever possible the most recently available data (1994) was obtained. However for some indicators data is only available for 1990/91 and 1992.

Tables 1.0 - 1.9 overleaf summarise the data collection plan for the study. Detailed worksheets which explain how each indicator was calculated and the intermediate values used are contained in a separate Data Collection Report submitted during an earlier phase of the study.

Table 1.0: Data Collection Plan  
Module 0 - Background Data

**Module 0: Background Data**

No.	Indicator Name	Description	Geographical Coverage	Base Year	Sources	Comments
D1	Land Use	Surface of land (sq. km) in the urban agglomeration and/or in the metropolitan area used for: a) residential; b) business; c) agriculture; d) transport; e) recreational; f) vacant; g) water.	Harare Bulawayo	1994	Local authority planning department	Scale off formal zoning plans but de facto usage may not be possible to obtain
D2	Population	Total population by sex in: a) the city proper; b) the metropolitan area; c) the urban agglomeration; d) the country as a whole.	Harare Bulawayo National Other towns	1994	CSO 1992 Population Census extrapolated	Need to establish metropolitan and urban agglomeration boundaries. CSO EAs may not overlap with administrative boundaries
D3	Population Growth Rate	Annual population growth rate.	Harare Bulawayo Other towns	1994	CSO	Reliable
D4	Woman Headed Households	Total number of households headed by women.	Harare Bulawayo	1994	CSO	Reliable
D5	Average Household Size	Average number of persons per household.	Harare Bulawayo	1994	CSO	Reliable
D6	Household Formation Rate	Annual rate of growth of households.	Harare Bulawayo	1994	CSO	May not be available. check definition
D7	Income Distribution	Percentage of households and average household income by quintiles.	Harare Bulawayo	1992	CSO 1992 HIESurvey	Need to escalate incomes and express in US\$
D8	City Product per Person	City product divided by population.	Harare Bulawayo			
D9	Housing Tenure Type	Number of households in the following tenure categories: a) owned; b) purchasing; c) private rental; d) social housing; e) sub-tenancy; f) rent free; g) illegal; h) other.	Harare Bulawayo	1994	Local authority	

Table 1.1: Data Collection Plan  
Module 1 - Socio-Economic Development

Module 1. Socio-Economic Development

Numb	Indicator Name	Description	Geographical Coverage	Base Year	Sources	Comments
1	Households Below Poverty Line	Percentage of households situated below the poverty line by sex of household head.	Harare Bulawayo	1992	CSO HHIE Survey	Only available nationally; not broken out by gender
2	Informal/Undeclared Employment	Percentage of the employed population whose activity is part of the informal sector.	National urban	?	USAID/Gemini Study	Limited survey
3	Hospital Beds	Number of persons per hospital bed.	Harare Bulawayo National	1991 or 1994	City Medical Officer of Health; World Bank Development Indicators	May only be able to collect proxy measures of doctor/ 1000 people and nurse/ 1000 people
4	Child Mortality	Proportion of children who die before reaching their fifth birthday by sex.	Harare Bulawayo National	1991 or 1994	City Medical Officer of Health; World Bank Development Indicators	Reliable
5	School Classrooms	Number of school children per classroom per school in: a) primary schools; b) secondary schools.	Harare Bulawayo National	1991 or 1994	Local authority DHCS, Min. of Educn., WB Development Indicators	National figure on nos. of children enrolled is reliable; no. of classrooms may not be readily available. If not, unlikely to be collated in time.
6	Crime Rates	Number of reported crimes annually per 1000 population for: a) murders; b) thefts.	Harare Bulawayo	1994	ZRP	Reliable if available; may need to be collated -- unlikely to be collated in time

Table 1.2: Data Collection Plan  
Module 2 - Infrastructure

Module 2 Infrastructure

Number	Indicator Name	Description	Geographical Coverage	Base Year	Sources	Comments
7	Household Connection Levels	Percentage of households connected to: a) water; b) sewerage; c) electricity; and d) telephone.	Harare Bulawayo Other towns	1994 1992	Local authorities; ZESA, PTC, CSO	Will need to be collated but should be possible; need to specifically enquire about informal and unauthorised structures
8	Access to Potable Water	Percentage of households with access to potable water.	National urban	1992	CSO	Reliable if available but need to consider households in unauthorised houses
9	Consumption of Water	Average consumption of water in litres per day per person, for all uses.	Harare Bulawayo Other towns	1994	Local authorities	Only indicates reticulated/official supplies; what of ground water?
10	Median Price of Water, Scarce Season	Median price paid per hundred litres of water in US dollars, at the time of year when water is most expensive.	Harare Bulawayo Other towns	1992 1995	Local authorities	Incidence of water sold privately is very low, therefore price charged by l.a. is reliable. Need to convert to US\$

Table 1.3: Data Collection Plan  
Module 3 - Transportation

Module 3. Transportation

Num	Indicator Name	Description	Geographical Coverage	Base Year	Sources	Comments
11	Modal Split	Proportion of work trips undertaken by: a) Private car; b) Train or Tram; c) Bus or minibus; d) Motorcycle; e) Cycling; f) Walking; g) Other.	Harare	1993	UZ/DRUP: DPP/UTU	Studies done with respect to Chitungwiza light rail link; may be with respect to high density suburbs and Chitungwiza link only; anecdotal information, no empirical data on whole city
12	Travel Time	Average daily time in minutes for a work trip.	Harare	1993	UZ/DRUP: DPP/UTU	Studies done with respect to Chitungwiza light rail link; may be with respect to high density suburbs and Chitungwiza link only; anecdotal information, no empirical data on whole city
13	Expenditure on Road Infrastructure	Per-capita expenditure in US dollars on roads (three year average).	Harare Bulawayo	1994	City Engineers	Reliable but needs collation and express in US\$
14	Automobile Ownership	Number of automobiles per 1000 population.	Harare Bulwayo	1994	City Treasurer (Liscencing Dept)	Reliable with respect to vehicles registered with the City Council; excludes numerous vehicles registered with adjacent Rural District Councils

Table 1.4: Data Collection Plan  
Module 4 - Environmental Management

Module 4. Environmental Management

Number	Indicator Name	Description	Geographical Coverage	Base Year	Sources	Comments
15	Percentage of Wastewater Treated	Percentage of all wastewater undergoing some form of treatment.	Harare Bulawayo	1994	City Engineer City Chemist	Reliable if collated within the time
16	Solid Waste Generated	Solid waste generated per person, in cubic metres and in tonnes per annum.	Harare Bulawayo	1994	City Engineer	Only collected with respect to solid waste collected (not generated; some may be buried on site or dumped in public areas)
17	Disposal Methods for Solid-waste	Proportion of solid wastes disposed: a) to sanitary landfill; b) incinerated; c) to open dump; d) recycled; e) other.	Harare Bulawayo Other towns	1994	City Engineer	Only collected with respect to solid waste collected by local authority
18	Regular Solid-waste Collection	Proportion of households enjoying regular solid-waste collection service.	Harare Bulawayo Other towns	1994	City Engineer	Reliable
19	Housing Destroyed	Percentage of current housing stock destroyed by natural or manmade disasters (ten years average).	n/a			

Table 1.5: Data Collection Plan  
Module 5 - Local Government

Module 5. Local Government

Num	Indicator Name	Description	Geographical Coverage	Base Year	Sources	Comments
20.1	Major Sources of Income	Indicator 20.1: Local government per-capita income: Total local government sources of funds in US dollars annually; both capital and recurrent for the metropolitan area, divided by population (three years average).	Harare Bulawayo	1992 1993 1994	Local authority audited accounts MLGRUD/PCMU	Reliable if it can be collated in time
20.2		Indicator 20.2: Percentage of local government income by source: a) Taxes; b) User charges; c) Other own-source income; d) Transfers from higher levels of government; e) Borrowings; f) Other income.	Harare Bulawayo	1994	Local authority audited accounts MLGRUD/PCMU	Reliable if it can be collated in time
21	Per-capita Capital Expenditure	Capital expenditure in US dollars per person, by all local governments in the metropolitan area, averaged over the last three years.	Harare Bulawayo	1994	Local authority consolidated accounts	Only possible to measure within municipal boundary Need to be collated
22	Debt Service Charge Ratio	Total principal and interest repaid, including bond maturations, as a percentage of total expenditure by local governments.	Harare Bulawayo	1994	Local authority consolidated accounts; City Treasurer	Reliable
23	Local Government Employees	Total local government employees per 1000 population.	Harare Bulawayo	1994	Town Clerks Annual Report	Reliable
24	Personnel Expenditure Ratio	Proportion of recurrent expenditure spent on wage costs.	Harare Bulawayo	1994	City Treasurer	Reliable
25	Contracted Recurrent Expenditure Ratio	Proportion of recurrent expenditure spent on contracted activity.	Harare Bulawayo	1994	City Treasurer  WB/PCMU study	Need to be collated from different Departments; may not be possible within the time May not yet be available
26	Government Level Providing Services	Urban services delivered to the population by type of service and type of supplier ("check boxes" indicator).	Harare Bulawayo Other towns	1994	Local authority Consultants	Reliable What are "check boxes"
27	Control by Higher Levels of Government	Independence of action of local government ("check boxes" indicator).	Harare Bulawayo Other towns	1994	Local authority Consultants	Anecdotal What are "check boxes"

Table 1.6: Data Collection Plan  
Module 6 - Housing Affordability and Adequacy

Module 6. Housing Affordability and Adequacy

Num	Indicator Name	Description	Geographical Coverage	Base Year	Sources	Comments
H1	House Price to Income Ratio	Ratio of the median free-market price of a dwelling unit and the median annual household income.	Harare Bulawayo	1992. 1994	PADCO/Plan Inc.	Available
H2	House Rent to Income Ratio	Ratio of the median annual rent of a dwelling unit and the median annual household income of renters.	Harare Bulawayo	1994	Local authority Estate agents Informal sector studies	Has to be collated from dispersed sources but important as more than 50% of urban population is renting
H3	Floor Area per Person	Median usable living space per person (m2).	Harare Bulawayo Other towns	1994	Local authority Estate agents Informal sector studies	May only be possible to use proxy measure of occupancy rate
H4	Permanent Structures	Percentage of housing units located in structures expected to maintain their stability for 20 years or longer under local conditions with normal maintenance.	Harare Bulawayo	1994	Local authority Research studies	Likely to be extremely unreliable
H5	Housing in Compliance	Percentage of the total housing stock in compliance with the current regulations.	Harare Bulawayo Other towns	1994	Local authority DPP, POO	Guessimate only

Table 1.7: Data Collection Plan  
Module 7 - Housing Provision

Module 7. Housing Provision

Numb	Indicator Name	Description	Geographical Coverage	Base Year	Sources	Comments
H6	Land Development Multiplier	Average ratio between the median land price of a developed plot at the urban fringe in a typical subdivision and the median price of raw, undeveloped land with planning approval in an area currently being developed.	Harare Bulawayo	1994	Private developers eg OMPIC, Glendinning, Gary Jones, GS Developments City Valuation & Estates	May be difficult to collate
H7	Infrastructure Expenditure	Ratio of the total expenditures (operations, maintenance, and capital) by all levels of government on infrastructure services (roads, sewerage, drainage, water supply, electricity and garbage collection) during the current year, and the urban population.	Harare Bulawayo	1994	Local authority MPCNH/NHF MLGRUD/GLF ZESA	Have to be collated from dispersed sources; may not be possible within the time
H8	Mortgage Credit Portfolio	Ratio of total mortgage loans to all outstanding loans in both commercial and government financial institutions.	National	1994	Building Societies MPCNH	Reliable
H9	Housing Production	Total number of housing units (in both the formal and informal sectors) produced in the previous year per 1000 population.	Harare Bulawayo Mutare Bindura	1992/93	PADCO/Plan Inc.	Available
H10	Housing Investment	Total investment in housing (in both the formal and informal sectors), as a percentage of gross domestic product.			CSO	

**Table 1.8: Data Collection Plan  
Module 8 – Housing Finance**

**Module 8. Housing Finance**

<b>Numb</b>	<b>Indicator Name</b>	<b>Description</b>	<b>Geographic Coverage</b>	<b>Base Year</b>	<b>Sources</b>	<b>Comments</b>
HF1	Mortgage-to-Deposit Difference	Average percentage difference between interest rates on mortgages in both commercial and government financial institutions and the interest rate on one-year deposits in the commercial banking system.	National	1991/92 1992/93	Reserve Bank of Zimbabwe, Building Societies and National Housing Fund	Reliable
HF2	Credit-to-Value Ratio	Ratio of mortgage loans for housing to total investment in housing (in both the formal and informal sectors).	Harare, Bulawayo	1992/93	Certificates of Occupation from cities; estate agents; Form BS4 from Building Societies	Available

**Module 9. Regulatory Audit**

Numb	Indicator Name	Description	Geographic Coverage	Base Year	Sources	Comments
RA1	Permit Approval Times Difference	The median length in months to obtain approvals, permits and titles for a medium-sized (50–200 units) residential subdivision in an area on the urban fringe where residential development is permitted.	Harare, Bulawayo, Mutare, Bindura	1992	PADCO Inc/Plan Inc.	Reliable; situation has deteriorated since 1992.
RA2	Public Land Ownership	Estimated percentage of total land in the metropolitan area that is owned by public agencies.	Kwekwe, Bindura, Masvingo	1994	Local authority estimates	Available

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**PART B: INDICATOR RESULTS AND ANALYSIS**

**MODULE 0 : BACKGROUND DATA**

**0.1**

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
<p><b>D1. Land use:</b> <i>Surface of land (sq. km) in the urban agglomeration and/or in the metropolitan area.</i></p>	<p>Bulawayo:            a) Residential: 301,6km<sup>2</sup>            b) Business: 17,9km<sup>2</sup>            c) Transport: 21,1km<sup>2</sup>            d) Recreation: 4,6km<sup>2</sup>            e) Vacant: 20,9km<sup>2</sup>            f) Water: 4,5km<sup>2</sup>            g) Other: 34,2km<sup>2</sup>  <b>Total 404,8km<sup>2</sup></b></p>
<p><b>D2. Population:</b> <i>Total population by sex in a) the city proper; b) the metropolitan area; c) the urban agglomeration; d) the country as a whole.</i></p>	<p><b>Municipal</b>  <b>Harare:</b>            1982 Male: 453 138                  F/Male: 396 097            1992 Male: 768 050                  F/Male: 710 760  <b>Total: 1 478 810</b>  <b>Bulawayo:</b>            1982 Male: 261 936                  F/Male: 233 381            1992 Male: 309 864                  F/Male: 311 878  <b>Total: 621 742</b>  <b>(907 000)</b>            1992            National: 10 412 548</p>

<p><b>D3.</b> Population growth rate: <i>Annual population growth rate.</i></p>	<p><u>City Growth Rate: 1982 - 1992</u> Harare: 6.0% Bulawayo: 7.0% Bindura: 4.5% Gwanda: 3.8% <u>Natural Growth Rate:</u> Harare: 3.13% Bulawayo: 3.13%</p>
<p><b>D4.</b> Women headed households: <i>Total number of households headed by women.</i></p>	<p>1992: Harare: 18.1% Bulawayo: 23.7%</p>
<p><b>D5.</b> Average household size: <i>Average number of persons per household.</i></p>	<p>1992: Harare: 4.06 Bulawayo: 4.25 National: 4.76</p>
<p><b>D6.</b> Household formation rate: <i>Annual rate of growth of households.</i></p>	<p>1992: Harare: 7.4% p.a Bulawayo: 2.5% p.a National: 3.6% p.a</p>
<p><b>D7.</b> Household Income Distribution: <i>Percentage of households and average household income by quintiles.</i></p>	<p>1992: Quintile 1: Z\$251 Quintile 2: Z\$503 Quintile 3: Z\$754 Quintile 4: Z\$1 006 Quintile 5: Z\$1 257</p>
<p><b>D8.</b> City Product per person <i>The total city product for the year divided by population</i></p>	<p>1990: Byo: US\$2518/person Hre: US\$2370/person</p>

D9. Tenure type <i>Percentage of households in tenure categories at both city and national levels:</i>	1992:		
	Natnl.	Har	Byo
<i>Owner/purchaser:</i>			
<i>Tenant:</i>	56.6	30	43.72
<i>Lodger:</i>	4.2	7	11.59
<i>Tied accommodation:</i>	14.5	48	34.88
<i>Other:</i>	20.5	14	8.94
<i>Not specified:</i>	1.5	1	0.86
	0	0	0.01

Sources:

1. City of Bulawayo "Bulawayo Master Plan" - the City of Bulawayo estimates its population to be 23% higher than the CSO figure (907 000 people as compared to 627,000).
2. City of Harare "Harare Combination Master Plan" 1992
3. CSO "Census 1992 Provincial Profile Bulawayo"
4. CSO "Census 1992 Provincial Profile Harare"
5. CSO "Census 1992 Zimbabwe National Report"
6. CSO "Incomes Consumption and Expenditure Survey 1990/91"
7. CSO "Quarterly Digest of Statistics" March 1995

## 0.2 Rationale Behind Module

The first module provides general background data on Zimbabwe's urban centres and the level of urbanisation within the country. Many of the indicator values in the module are intermediate values used in calculating indicators in the other modules.

## 0.3 Analysis of Indicator Values

0.3.1 The typical *land use* pattern in most of Zimbabwe's urban centres is one of low density urban sprawl. Bulawayo covers an area of 404.8 sq.km and Harare 570 sq.km resulting in densities of 1500 to 3000 people per square kilometre.

The effects of urban sprawl are costly - increasingly expensive capital requirements for bulk infrastructure in opening up new areas for development; long travel times for the journey to work; high per unit costs in servicing residential stands even in low income, higher density areas.

0.3.2 The *annual population growth rate* in Zimbabwe's urban centres is approximately double the natural population growth rate. The rate of urbanisation has steadily increased from approximately 17 percent of the population in 1970 to 31 percent by 1992.

Of the country's total urban population (3,228 million) only 31 percent live in Harare, reflecting a fairly well developed urban hierarchy in the country. However 74 percent of the urban population live in the three urban centres of Harare, Chitungwiza (a dormitory town 35km from Harare) and Bulawayo.

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- 0.3.3 Whereas in both rural and urban areas, 33 percent of households are *women-headed* in the urban areas a lower 18 - 24% are women-headed. One of the reasons for this is the persistently strong cultural and economic ties that urban households maintain with their rural homesteads ("Kumusha"). It is not uncommon for single men to work in the urban areas and leave their wives and children looking after the rural homesteads.
- 0.3.4 This pattern of urbanisation is also reflected in the slightly smaller *average household size* found in urban areas compared to the national average.
- 0.3.5 *Household incomes* are heavily skewed in urban areas. These income differentials are becoming increasingly pronounced as formal sector employment has failed to keep pace of population growth. More and more households are reliant on self-employment in the informal sector where incomes are lower than in the formal sector.
- 0.3.6 The *city product per person* indicator is a dramatic measure of the wealth generated by Zimbabwe's two main cities. It is calculated as follows:

Assuming that the ratio of GNP to household income is the same at the national and city levels, the City Product is calculated as follows:

(i)	GNP (1990)	Z\$ 14 634 000 000 (US\$ 5 550 676 200)
(ii)	Total national Household income 1990	Z\$ 8 392 700 000
(iii)	Households	(Byo 140 000 Hre 320 200)
(iv)	Average Household Income (Urban)	Byo and hre Z\$ 14 624

City Product is therefore (i) x (ii) x (iv) (ii) which is

$$(a) \text{ Bulawayo} = \frac{14\,634 \text{ million} \times 140\,000 \times 14624}{8\,392.7 \text{ million}} = \text{Z\$ } 3\,569\,896\,008$$

$$\text{US\$ } 1\,354\,061\,555$$

$$(b) \text{ Harare} = \frac{14\,634 \text{ million} \times 320\,200 \times 14624}{8\,392.7 \text{ million}} = \text{Z\$ } 8\,164\,862\,158$$

$$\text{US\$ } 3\,096\,932\,216$$

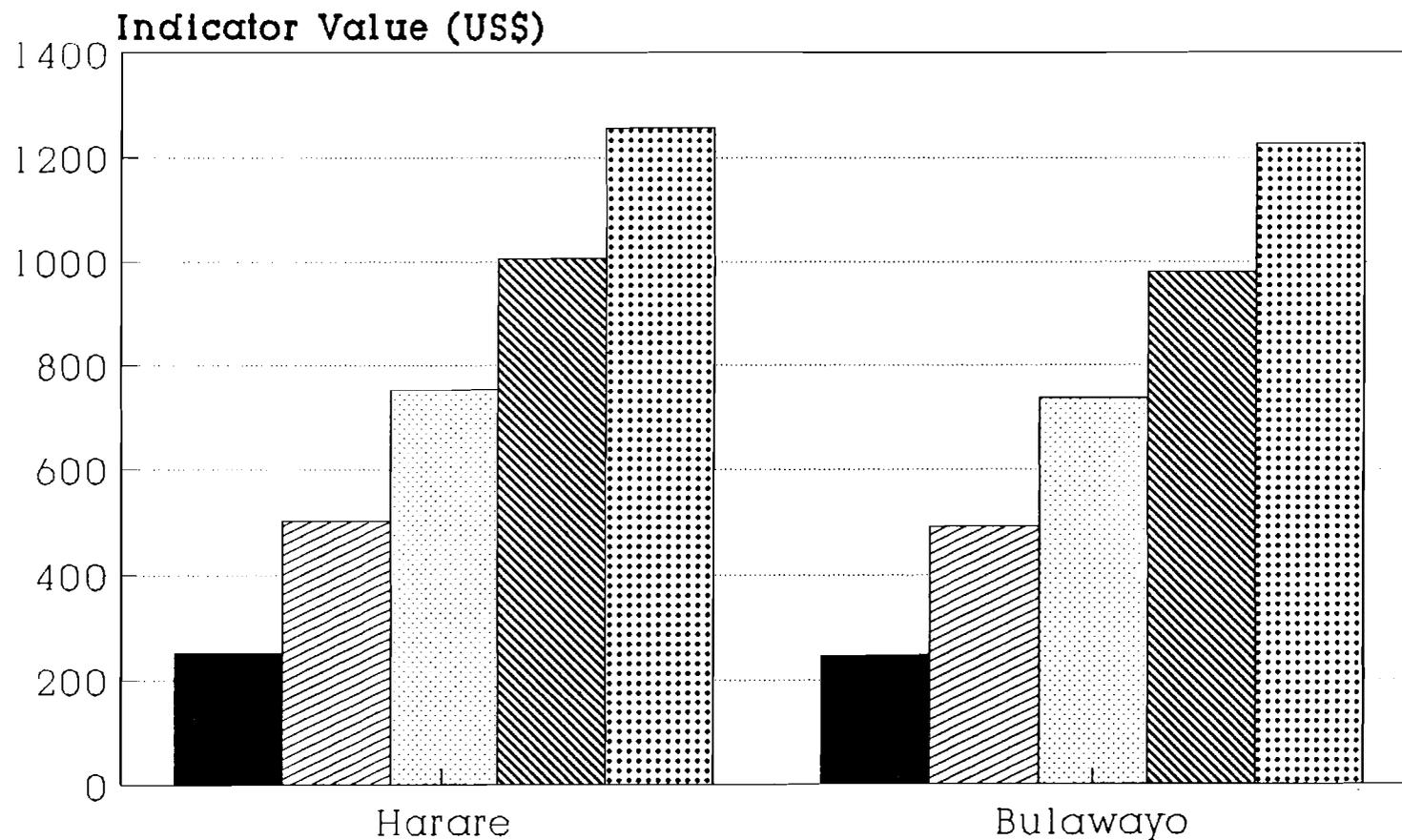
In 1990 (latest figures available) the Gross national Product was US\$ 5,550,676,200. The City Product for Bulawayo was US\$ 1,354,061,555 and for Harare was US\$ 3,096,932,216, i.e the two cities contributed a full 80 percent of the country's GNP through sectors such as manufacturing, utilities, construction, wholesale and retail trade, transport and communications, finance, insurance, real estate and business services, community, personal and other domestic services and government.

- 0.3.7 The *tenure* indicator highlights the difficulties of urban households in buying their

own house and large proportion of households (the majority in Harare) who are lodgers. Lodgers rent accommodation formally but have no written agreements and documents with their landlord and as such, enjoy only a precarious degree of security of tenure.

## Zimbabwe Shelter & Urban Indicator Study

### Indicator D7: H/Hold Income Distribution



**LEGEND**

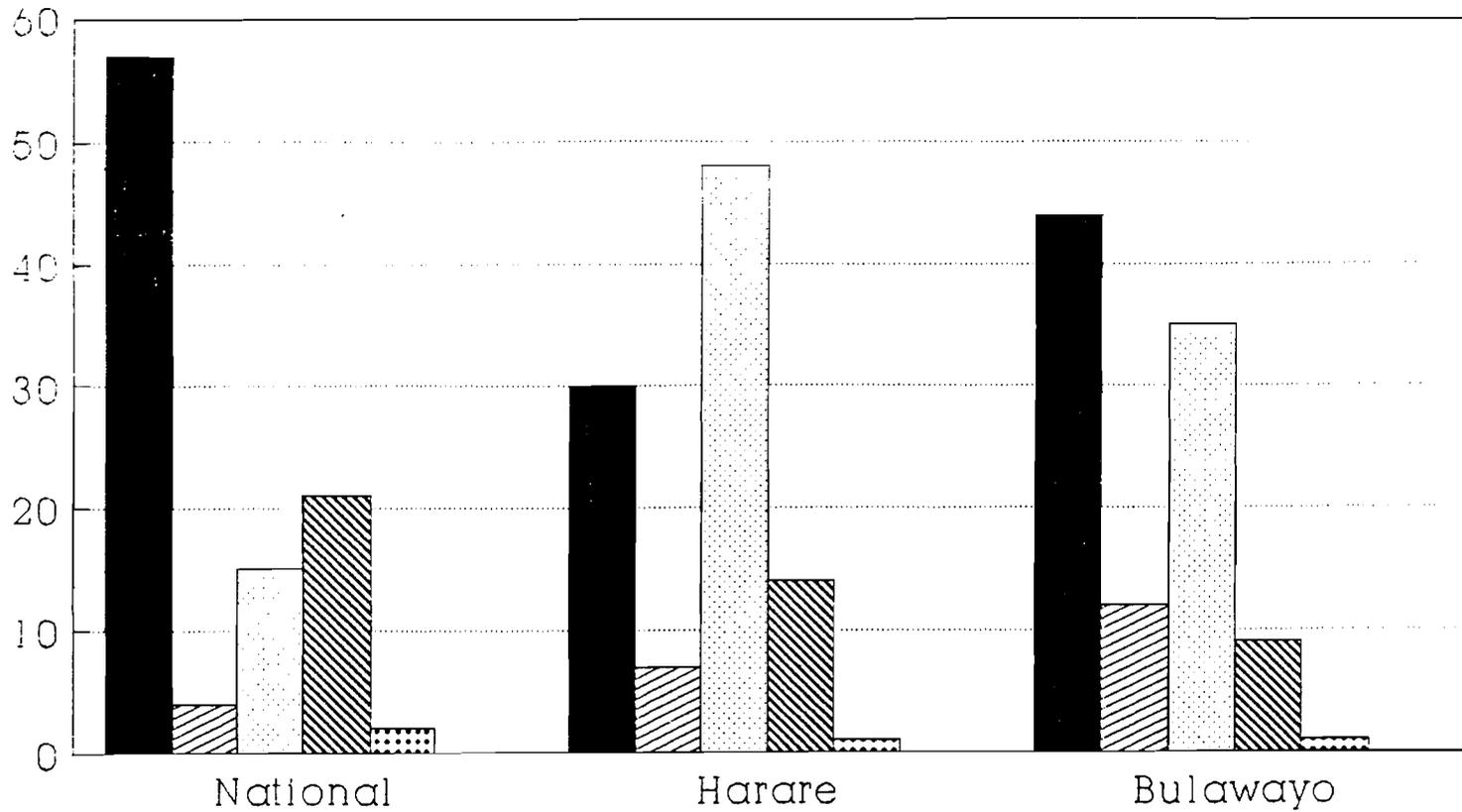
Series 1    
  Series 2    
  Series 3    
  Series 4    
  Series 5

Series 1= Quintile 1     Series 3= Quintile 3     Series 5= Quintile 5  
 Series 2= Quintile 2     Series 4= Quintile 4

# Zimbabwe Shelter & Urban Indicator Study

Indicator Value (%)

Indicator D9: Tenure Type



- Series 1
- Series 2
- Series 3
- Series 4
- Series 5
- Series 6

LEGEND

Series 1= Owner/Purchaser  
Series 2= Tenant

Series 3= Lodger/Subtenant  
Series 4= Tied Accomodation

Series 5= Other  
Series 6= Not specified

MODULE 1 : SOCIO-ECONOMIC DEVELOPMENT

1.1

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
1. Households below poverty line: <i>Percentage of households situated below the poverty line by gender of household head.</i>	Not available
2. Informal/undeclared employment: <i>Percentage of the employed population whose activity is part of the informal sector.</i>	1992: 9,99% 1993: 13,32% 1992: Male: 5,4% Female: 19,8% 1993: Male: 7,9% Female: 25,4%
3. Hospital beds: <i>Number of persons per hospital bed.</i>	<u>Byo:</u> 263:1 (2819 beds) <u>National (Urban &amp; Rural):</u> 180:1)
4. Child mortality: <i>Proportion of children who die before reaching their fifth birthday by gender (1990-1994).</i>	<u>National</u> Total: 77,2/1000 Male: 66 Female: 53 <u>National Urban</u> 10,1/1000
5. School classrooms: <i>Number of school children per classroom per school in a) primary schools; b) secondary schools.</i>	<u>Byo:</u> Primary: 42 Secondary: 40
6. Crime rates: <i>Number of reported crime rates annually per 1000 population for a) murders; b) thefts.</i>	<u>National (Urban &amp; Rural)</u> Murders: 95,9 Thefts: 17680 <u>National Urban</u> Not available

Sources:

1. CSO "Indicator Monitoring Survey 1991"
2. CSO "Zimbabwe Demographic and Health Survey 1994", Preliminary Report
3. CSO "Quarterly Digest of Statistics" June 1995
4. Consultants interviews with City of Bulawayo and City of Harare officials

## 1.2 Rationale Behind Module

Issues of poverty, city economy, health, education and welfare are at the heart of what makes a city function - issues which are addressed in the module as social and economic development. The module looks at how Zimbabwe's urban centres have developed economically, whether inequality is widespread (poverty and employment), whether cities have invested in human development through health and education and whether they have been successful in achieving social cohesiveness and harmony, in particular reducing urban crime and violence.

## 1.3 Analysis of Indicator Values

1.3.1 The *percent of households below the absolute poverty line* is not available. However what is reliably known are average annual household net incomes<sup>1</sup>. In 1990/91:

* National, urban and rural annual household total net income	Z\$ 6 049
* National urban (Harare and Bulawayo) annual household total net income	Z\$ 14 624
* Average annual household net income for male headed households in urban areas	Z\$ 11 463
* Average annual household net income for female headed households in urban areas	Z\$ 8 633

Average incomes in urban areas are more than double national average incomes - a factor which contributes heavily to rural to urban population movements. (However there are likely to be large variations between household incomes).

Of interest is that the average income of male headed households is 33 percent higher than the average income of female headed households. This may be attributed to the tendency for women to be more predominantly engaged in lower-paid jobs and self employment (see indicator 2.). Furthermore male headed households will also often have an adult female spouse in employment contributing to the household income. Female headed households are less likely to have an economically active male spouse present.

<sup>1</sup>

Source: CSO "Income Consumption and Expenditure Survey Report 1990/91", Tables A4, D1 and F1.

1.3.2 The *percent of the employed urban population who are part of the informal sector* was 9,99%<sup>2</sup> in 1992 but had risen by one third to 13,32% by 1993<sup>3</sup>. This increase in own account work in the informal sector is likely to have continued rising in the past three years due to the inability of the formal sector to keep pace of employment requirements of the rapidly growing population, particularly given the pressures of the severe droughts of 1992/93 and 1994/95.

Informal sector employment among urban males was only 5,44% in 1992 rising to 7,91% in 1993 whereas for females it was over three times this, at 19,83% in 1992 and 25,41% in 1993.

1.3.3 The *number of persons per hospital bed* was 263 in urban areas whereas the national, urban and rural figure is 180 patients per bed. However this urban figure includes only hospital beds and excludes the health services offered at 18 of the Municipal clinics which also serve the population (including full maternity wings at 4 of the clinics).

A useful proxy measure of health care in urban areas is the percentage of women (aged 12 - 49 years) who gave birth in 1993 at a health facility; 92,4% in the case of women in urban areas compared to only 57,9% of women in rural areas.

1.3.4 The *child mortality rate* in under-fives is 77,2 per 1000 in Zimbabwe as a whole (urban and rural).

The combination of higher incomes, better access to potable water and higher levels of health facilities all translate into markedly lower under-five mortality rates in urban areas:-

8,9 per 1000 in Harare (1991)<sup>4</sup> and  
11,2 per 1000 in Bulawayo (1990/91)<sup>5</sup> giving a national urban average of 10,1 per 1000.

There is not a marked difference in child mortality rates disaggregated by gender (it is slightly higher for males). For this reason the City of Bulawayo no longer collects its mortality statistics by gender.

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2 Source: CSO "Census 1992, Zimbabwe National Report", Table 6.4(b) - comprising "own account workers" and "unpaid family workers".

3 Source: CSO "Indicator Monitoring Survey 199", Table 3.1(b).

4 Source: City of Harare "Annual Report of the City Health Department 1991".

5 Source: Supplied by the Director of Health Services, City of Bulawayo.

However a matter for concern is the steadily increasing under-five mortality rate over the past five years, as illustrated by the rates recorded in Bulawayo, as shown in the table below:

**Table 1: Under Five Mortality in Bulawayo (1990/91 to 1993/94)**

YEAR	EST. <5 POP.	<5 DEATHS	RATE PER 1000
1990/91	89850	1003	11,2
1991/92	92000	1316	14,3
1992/93	94000	1370	14,6
1993/94	96350	1716	17,8

Source: City Medical Director of Health, City of Bulawayo

After witnessing a steady fall in infant and under-fives mortality rates from 1980 to 1987, rates have been rising steadily since 1989 with more than a doubling of the IMR between 1989 and 1994. HIV infection is largely responsible for this sharp increase (being the cause of 18,5% of all infant deaths in Bulawayo in 1993/94 for example), although other factors of household poverty and unemployment have also contributed to the trend.

1.3.5 The *number of schoolchildren per classroom* is 42 in primary schools and 40 in secondary schools<sup>6</sup>.

The figure is skewed by the prevalence of "hot-seating" (double sessioning), particularly in schools in the high density, low income areas. For example, in Old Pumula and the schools in the Hyde Park peri urban informal settlement of Bulawayo, one finds a ratio of 66 children per classroom although there is a ratio of only 40 children per teacher<sup>7</sup>.

It is interesting to note that whereas 13,6% of the national population (rural and urban) aged 5 years and older have never been to school, only 7,3% of the urban population of this age has never been to school - indicating greater access (physical, economic and social) to schools within urban areas. A slightly higher percentage of urban females (8%) compared to males (6,6%)

<sup>6</sup> Source: Supplied by the Chief City Planner, City of Bulawayo.

<sup>7</sup> The Ministry of Education's standard is .....????

have never been to school<sup>a</sup>.

1.3.6 The *number of murders and thefts occurring annually per 1000 population* is not available disaggregated for urban areas.

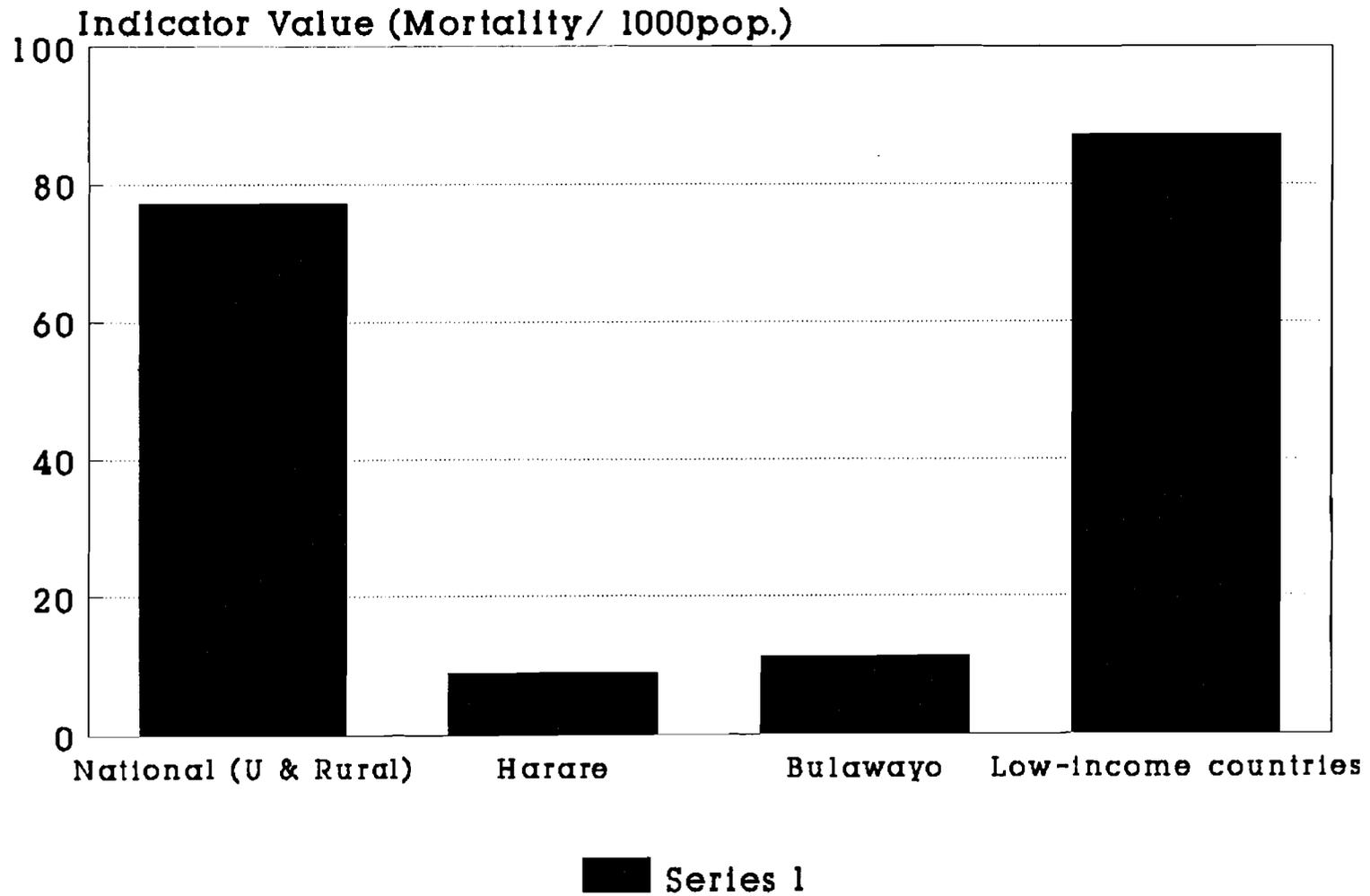
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<sup>a</sup>

CSO "Census 1992 Zimbabwe National Report", Table A5.1

# Zimbabwe Shelter & Urban Indicator Study

## Indicator 4: Child Mortality



MODULE 2 : INFRASTRUCTURE

2.1

INDICATOR NAME AND DESCRIPTION	NATIONAL, URBAN VALUE
<p>Indicator 7 : Household connection levels Percentage of households connected to a) water b) sewerage c) electricity d) Telephones</p> <p>a) <u>Water</u> :</p> <p><i>Harare</i> 89% <i>Bulawayo</i> 97% <i>Gwanda</i> 45% <i>Bindura</i> 94% <i>Gutu-Mupandawana</i> 12,5% <i>National (urban)</i> 81% <i>National (urban &amp; rural)</i> 35%</p> <p>b) <u>Sewerage</u> :</p> <p><i>Harare</i> 93% <i>Bulawayo</i> 98% <i>Gwanda</i> 34% <i>Bindura</i> 42% <i>Gutu-Mupandawana</i> 10,9% <i>National (urban)</i> 67% <i>National (urban &amp; rural)</i> 37%</p> <p>c) <u>Electricity</u> :</p> <p><i>Harare</i> 64% <i>Bulawayo</i> 92% <i>Gwanda</i> 9% <i>Gutu-Mupandawana</i> 11% <i>National (urban)</i> 55% <i>National (urban &amp; rural)</i> 28%</p> <p>d) <u>Telephones</u> :</p> <p>Call boxes/1000 (Mhiba) Not available</p>	
<p>Indicator 8 : Access to Potable water Percentage of Households with access to Potable Water</p> <p><i>Harare</i> 97% <i>Bulawayo</i> 100% <i>National (urban)</i> 99% <i>National (urban &amp; rural)</i> 56%</p>	

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN LIMITS
<p><b>Indicator 9 : Consumption of Water</b> Average consumption of water in litres per day per person for all uses (excludes unaccounted for water)</p> <p style="text-align: right;"><u>Harare</u> :     <i>High Density Areas</i>                           <i>Low Density areas</i></p> <p style="text-align: right;"><u>Bulawayo</u> :    <i>High Density Areas</i>                           <i>Low Density areas</i></p> <p style="text-align: right;"><u>National (Urban)</u> : <i>High Density Areas</i>   <i>Low Density areas</i></p>	<p>80 litres 120 litres</p> <p>80 litres 250 litres</p> <p>80 litres 185 litres</p>
<p><b>Indicator 10 : Medium price of water scarce season</b> Median price paid per hundred litres of water in US\$ at the time of year when water is most expensive.</p> <p style="text-align: right;"><u>Harare</u> <u>Bulawayo</u> <u>Gwanda</u> <u>Bindura</u></p>	<p>Z\$1,15/m<sup>3</sup> Z\$2,05/m<sup>3</sup> Z\$2,50/m<sup>3</sup> Z\$2,08/m<sup>3</sup></p>

Sources:

1. City of Harare and City of Bulawayo Annual Reports of Directors of Engineering Services
2. Consultants interviews with local authority officials
3. CSO "Census 1992 Zimbabwe National Report"
4. CSO "Census 1992 Provincial Profile Bulawayo"
5. CSO "Census 1992 Provincial Profile Harare"
6. Water tariff Report of City Treasurers

## 2.2 Rationale Behind Module

The adequacy of infrastructure helps determine one country's success and another's failure - in diversifying production, expanding trade, coping with population growth, reducing poverty or improving environmental conditions. Good infrastructure raises productivity and lowers production costs. Limited access to or poor quality infrastructure services in developing countries can be major impediments to business productivity and major sources of health risk and frustration to the population.

Major investments have been made in infrastructure stocks but in many developing countries these assets are not generating the quantity or the quality of services demanded. There is therefore need for infrastructure to be :-

- cost effective
- efficient

- user responsive

This will stimulate economic growth, give rise to opportunities for poverty reduction and contribute to environmental sustainability.

## 2.3 Analysis of Indicator Values

### 2.3.1 Overall Analysis

The figures for Harare have been adversely affected by the inclusion of the peri urban settlement Epworth (population 63 000) in Harare Urban in terms of CSO classification. Although Epworth is administered separately from Greater Harare the long term strategy is to incorporate it within the City's administration. This concept is now evident in the new infrastructural standards which are being implemented in Epworth as these are influenced by standards set by Harare City Council.

Generally, for urban settings there is a fairly high percentage of households with access to principal networked services.

Water consumption figures for high density areas are identical for both Harare and Bulawayo. The figures are based on metered readings averaged over a period of time. There is, however, a marked difference between the per capita consumption for the two cities in low density areas. Possibly Bulawayo residents are more conscious with regard to general uses of water as a result of the perpetual water problems experienced by the City in recent years. The higher marginal cost of piped water in Bulawayo could also have a restraining effect to the use of water.

### 2.3.2 Household Connection Level

The indicator is a measure of housing quality as it gives a picture of the level of residential amenities that are associated with available housing.

The city of Harare enjoys about 89% water connection levels as compared to 97% for the city of Bulawayo. A lot of work needs to be carried out in Epworth to bring it to the same level of service enjoyed by other low income housing areas. The national average of 35% which includes rural areas is a clear indication that Zimbabwe needs not only to broaden the quantity of infrastructure stock but to improve the quality of infrastructural services. The indicator values for sewerage connection levels are highly correlated to those for water connections.

There is a dramatic deterioration of indicator values for electricity connections at both urban and national levels. While electricity coverage is fairly high in Bulawayo (92%) it is disappointing for harare (64%) and 28% at national level.

There may be a case for the Zimbabwe Electricity Supply Authority (ZESA) to explore the least cost approach to supplying power and distribution of power.

### 2.3.3 Access to Potable Water

Potable water is water free from contamination which is safe to drink without further treatment. Without applying any rigorous health or hygienic standards, households using piped water, communal standpipes, protected boreholes and wells could be assumed to have access to potable water. In order to be consistent with the Central Statistics Office's classification, access to potable water has been taken as any safe water point within 500m.

It should however, be noted that the WHO standards specify a distance of 200m from a water source as a provision for access to potable water.

Bulawayo provides water points for informal, peri-urban settlement areas in Hyde Park and all indications are that the squatter camps in Killarney and Richmond (by the dump site) can obtain potable water within reasonable working distance. Although the figure for Harare (97%) is marginally lower than the national urban average (99%), it must be pointed out that there is no single household administered by Harare City Council which does not have access to potable water. Epworth is separately administered by Epworth local board under the Ministry of Local Government.

### 2.3.4 Consumption of Water

Access to at least minimal infrastructure services is one of the essential criteria for defining welfare. To a great extent, the poor can be identified as those who are unable to consume a basic quantity of clean water and who are subject to unsanitary surroundings, with extremely limited mobility or communications beyond their immediate settlements. Different infrastructure sectors have different effects on improving the quality of life and reducing poverty.

Access to clean water and sanitation has the most obvious and direct consumption benefits in reducing mortality and morbidity.

Consumption of water per person depends on the availability and price of water, the climate and uses to which water is customarily put by individuals e.g drinking, bathing, washing and gardening. Generally counal rates are designed to enable all households to get sufficient water for good health and reasonable standard of living.

Harare and Bulawayo have a fairly mixed population although the residential settlement pattern throughout the city is differentiated on economic lines. This is evidenced by the consumption of water in high density areas of 80 litres per person per day. Consumption patterns in low density areas where the more affluent members of society live is 120 litres per person per day for Bulawayo and more than 200 litres per person per day for Harare. However, these figures should be viewed with caution as the number of people per stand has increased dramatically over the last decade.

Some sources believe there may well be over 15 people per stand in high density areas and about 8 people per stand in low density areas (see indicator H3, Module 6).

### 2.3.5 Median Price of water scarce season

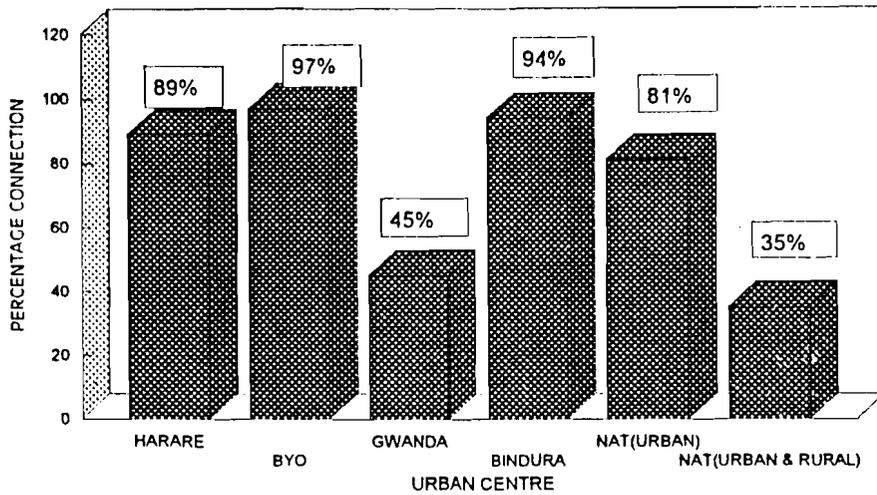
The price of water may rise to very high levels during times of water scarcity and can take a significant proportion of the household budget. In Zimbabwe water tariffs are generally revised once a year.

Most local authorities in Zimbabwe have a rising block tariff structures designed to encourage water conservation. The tariffs are set in such a way that the quantity for the first block ensures that all households can get adequate water for good health and a reasonable standard of living at a price which is affordable. The subsequent blocks would logically include the additional water that more affluent households would reasonably be expected to consume, while at the same time discouraging the extravagant use of water for, for example irrigating large ornamental gardens for instance.

As over 50% of households in urban centres have piped water, the median price of water has been taken as the marginal cost. This is the cost of supplying water at the margin rather than the average of all water supplied.

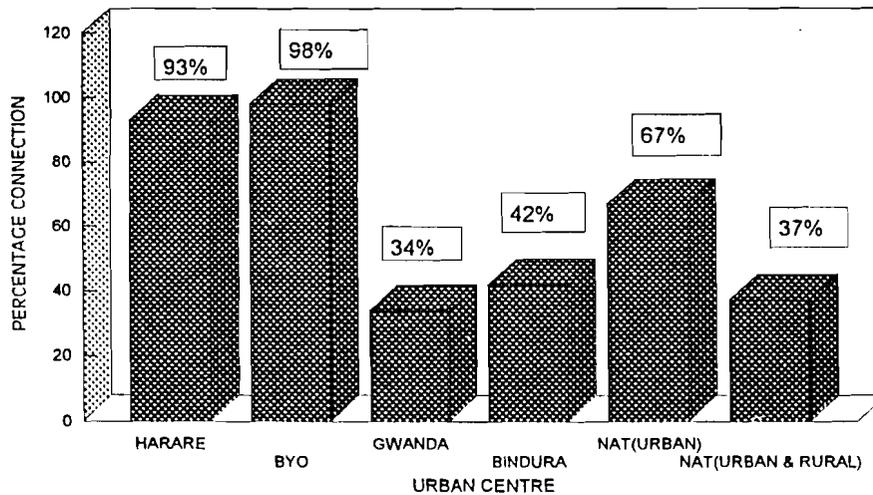
The median price of water for Bulawayo of Z\$2,04/m<sup>3</sup> is 40% higher than the median price of water for Harare of Z\$1,45/m<sup>3</sup>. The punitive median price of water for Harare is Z\$5,00/m<sup>3</sup> which is only applied during drought situations.

**INDICATOR 7**  
HOUSEHOLD CONNECTION LEVEL: WATER



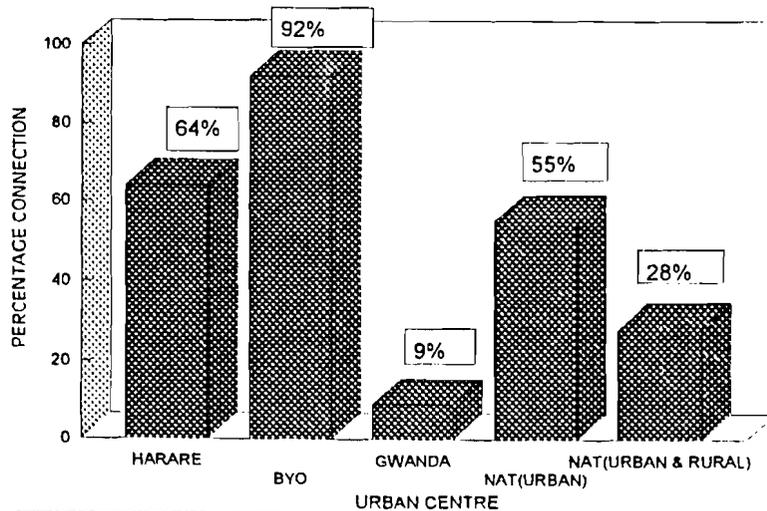
Percentage of households connected to water

**HOUSEHOLD CONNECTION LEVEL: SEWERAGE**



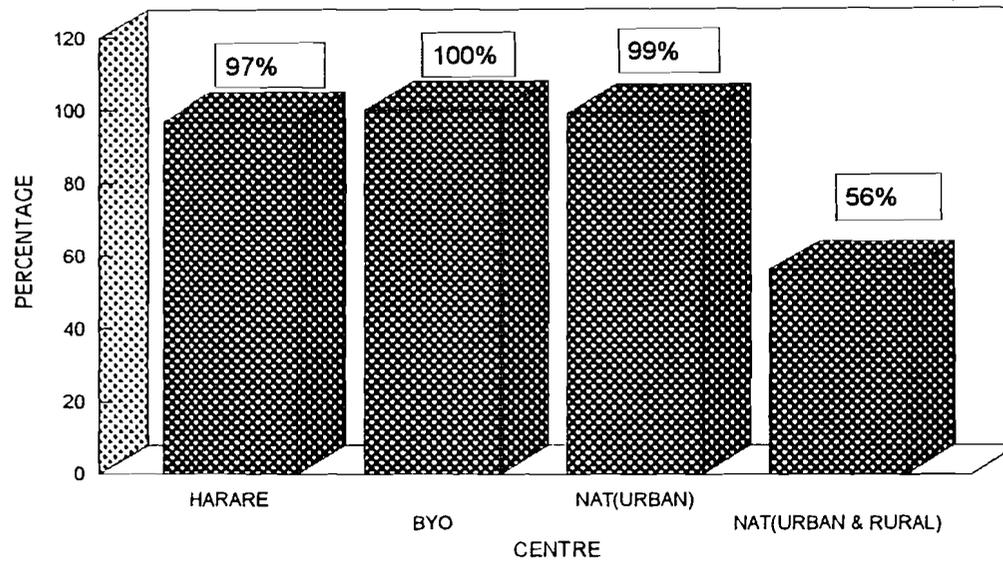
Percentage of households connected to sewerage

**HOUSEHOLD CONNECTION LEVEL: ELECTRICITY**



Percentage of households connected to electricity

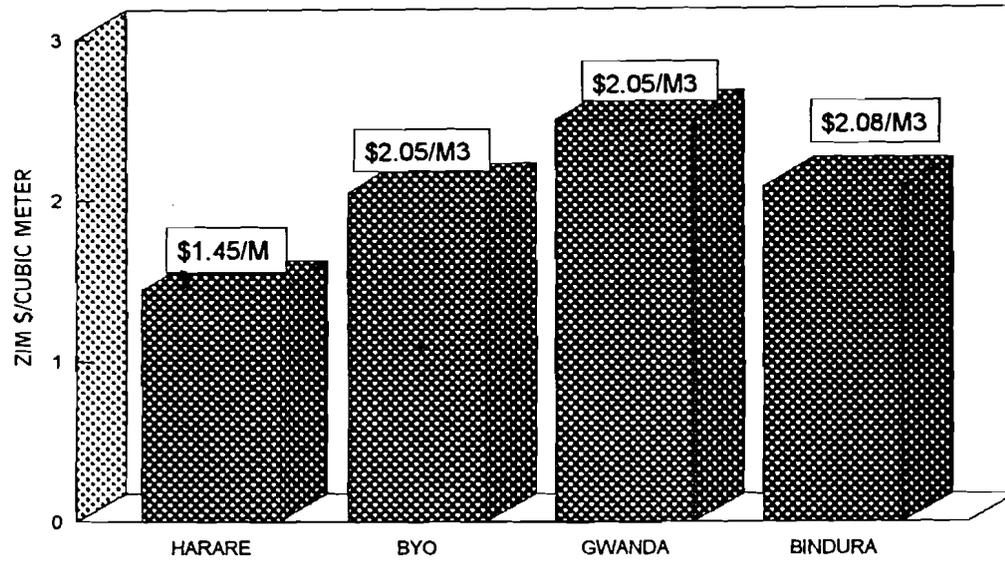
**INDICATOR 8**  
ACCESS TO POTABLE WATER



Percentage of households with access to potable water

157

**INDICATOR 10**  
MEDIAN PRICE OF WATER



Median price paid per cubic meter of water

53

MODULE 3 : TRANSPORTATION

3.1

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUES
<p>Indicator 11 : Modal Split Proportion of work trips undertaken by a) Private car, b) Train, c) Bus or minibus, d) Motorcycle, e) bicycle, f) walking, g) other</p>	
<p style="text-align: center;"><u>Urban</u></p> <p><i>Private car</i> 22,9%</p> <p><i>Train</i> 0%</p> <p><i>Bus or minibus</i> 47,8%</p> <p><i>Motorcycle</i> 0%</p> <p><i>Bicycle</i> 5,3%</p> <p><i>Walk</i> 6,0%</p> <p><i>Other (emergency taxi etc)</i> 18%</p>	
<p style="text-align: center;"><u>National</u></p> <p><i>Private car</i> 9,8%</p> <p><i>Train</i> 0%</p> <p><i>Bus or minibus</i> 17,4%</p> <p><i>Motorcycle</i> 0%</p> <p><i>Bicycle</i> 2,8%</p> <p><i>Walk</i> 61,7%</p> <p><i>Other (emergency taxi etc)</i> 8,3%</p>	

Proportion of Work Trips undertaken by

	Men		Women		All	
	a Urban	b National	c Urban	d National	a + c Urban	b + d National
a) Private car	15,3%	6,6%	7,6%	3,2%	22,9%	9,8%
b) Train	--	--	--	--	--	--
c) Bus or Minibus	36%	13,1%	11,8%	5,6%	47,8%	17,4%
d) Motorcycle	--	--	--	--	--	--
e) Bicycle	5,0%	2,6%	0,3%	0,2%	5,3%	2,8%
f) Walking	3,3%	34,2%	2,7%	27,5%	6,0%	61,7%
g) Other	11,2%	5,2%	6,8%	3,1%	18%	8,3%

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUES
<p>Indicator 12 : Travel Time</p> <p>The average time in minutes for a work trip</p>	56,1 minutes
<p>Indicator 13 : Expenditure on road infrastructure</p> <p>Defined as per-capita expenditure in US Dollars on roads (three year average)</p> <p>Harare Bulawayo</p>	<p>US\$7,87/capita</p> <p>US\$7,44/capita</p>
<p>Indicator 14: Automobile Ownership</p> <p>Defined as the ratio of automobiles to 1000 population.</p> <p>Bulawayo (automobiles/1000 population)</p>	81

Sources:

1. CSO "Indicator Monitoring Survey 1991"
2. Dept of Physical Planning "Passenger Waiting Times, Opinions and Performance" 1991
3. City of Harare "Socio-economic survey of high density areas", 1989

### **3.2 Rationale behind Module**

Zimbabwe is currently entering its second five-year phase of economic structural adjustment and trade liberalisation. In this context, the Zimbabwe Government has deregulated the Passenger Transport Sector. The deregulation has broadened passenger transport opportunities and legalised Commuter Omnibuses. The increased vehicle population and broadened modes of transport have all been carried out against a background of limited municipal traffic planning and infrastructure management resulting in major traffic management problems in the major cities.

The impact of poor transport planning often leads to signs of urban dysfunction such as severe traffic congestion with uncontrollable mixes of traffic types, poorly operating public transport networks, lack of local traffic management, accidents and air/noise pollution.

Mobility is an essential part of daily life and it is the main means of access to city services and social opportunities. Mobility is a main determinant of access to employment as well as social integration.

Public transport networks remain generally inadequate to fully respond to the needs of all urban residents.

### **3.3 Analysis of Indicator Values**

#### **3.3.1 Modal Split**

Too-rapid growth without a corresponding increase in infrastructure provision often shows itself most directly in road congestion. Despite huge investment in transport infrastructure in Zimbabwe traffic congestion is now a major problem particularly in Harare.

The everyday problems arising out this traffic problem in Harare, include among others, decreased accessibility, congestion, inadequate infrastructure facilities, poor interchange and attendant environmental problems. Almost fifty percent of urban workers use buses (47,8%) including minibuses while 23% use private cars. The percentage using emergency taxis and private taxis is also fairly high at 18% while those using bicycles and those who walk to work are a minority at 5,3% and 6,0% respectively.

A further analysis of the mode of transport reveals that women are less mobile than men. They are less likely than men to have a personal vehicle. Women are also less inclined to use a bicycle and seem to be more sensitive to the family budget than men. For each mode of transport there are proportionally more males than females using that mode.

The train or tram system within urban settings is poorly developed in Zimbabwe, however a feasibility study has just been completed to link Harare with Chitungwiza. Load factors permitting, this mode of transport may have a profound impact on modal split in Harare.

### 3.3.2 Travel Time

The journey to work should measure the extent to which the transportation system is successful in overcoming problems caused by high densities or spatial expansion of the urban area. Average travel time in the city should not be excessive and travel expenses should not take an undue proportion of the household budget.

The weighted average bus speed is 30,5km/h while the average distance of one way commute in Harare is 16km. This gives a travel time of 31,5 minutes. Added to this figure is the time spent walking to the bus stop (2,0 minutes) and waiting time, which is averaged at 22,6 minutes. This gives the total travel time as 56,1 minutes.

### 3.3.3 Expenditure on road infrastructure

Infrastructure investments have often been misallocated - too much to new investment, not enough to maintenance; too much to low priority projects and not enough to essential services. The provision of road infrastructure has been characterised by severe budget cuts at both capital and recurrent expenditure levels.

**City of Harare Expenditure on Roads Infrastructure (Z\$)**

Year	1993/94	1994/95	1995/96 (Budget)
Capital	57 403 000	55 100 000	26 915 000
Maintenance & operating	40 771 975	37 328 000	38 302 000
TOTAL	98 174 975	92 428 000	65 217 000
Population	1 229 883	1 303 676	1 381 896
Expenditure per capita	79,82	70,90	47,19

The per capita expenditure for the City of Harare shown in the table above indicates major deterioration of investment in roads infrastructure. Curbing capital spending may be justified during periods of budgetary austerity, but reducing maintenance spending is false economy. Such cost have to be compensated for later by much larger expenditure or road rehabilitation or outright replacement costs. The

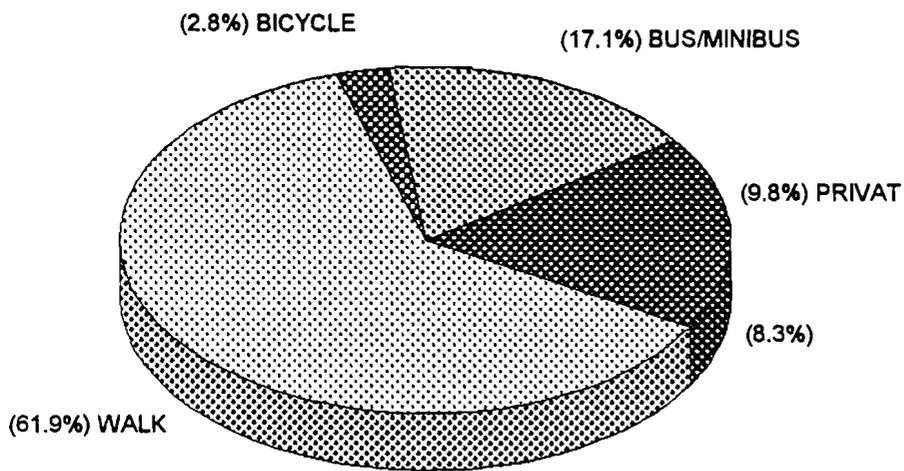
engineering and physical properties of paved roads are such that, as a road begin to deteriorate, lack of regular routine maintenance will hasten deterioration.

### **3.3.4 Automobile Ownership**

The growth in car ownership has had a significant impact on traffic volumes. The growth in traffic volumes has not been accompanied by corresponding increase in user facilities i.e road widening, junction capacity expansion and rationalised traffic network system. This leads to traffic congestion. For any given class of highway, be it a freeway, highway with access or local street, congestion increases directly with an increase in traffic volume until the volume is almost equal to the capacity of the facility, at which point congestion becomes very acute.

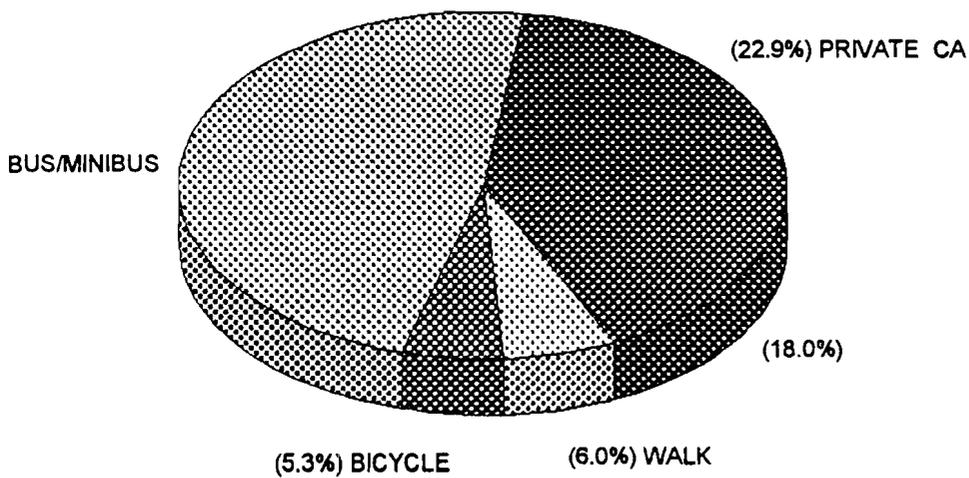
The car ownership indicator can assist Local Authorities to monitor congestion on a tracking basis and come up with corrective measures to alleviate it. Automobile ownership is also a direct measure of benefits accruable to the population. These benefits are measured with regard to reduction in travel time, increases in net incomes, increases in creation of comforts and conveniences.

**INDICATOR 11**  
MODAL SPLIT:TYPICAL NATIONAL



PROPORTION OF WORK TRIPS UNDERTAKEN

**INDICATOR 11**  
MODAL SPLIT:TYPICAL URBAN



PROPORTION OF WORK TRIPS UNDERTAKEN

MODULE 4 : ENVIRONMENTAL MANAGEMENT

4.1

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
<p>Indicator 15: Percentage of waste water treated. Percentage of all wastewater undergoing some form of treatment.</p> <p style="text-align: right;">Harare <i>Central Treatment Works</i> <i>Individual Septic Tanks</i></p> <p style="text-align: right;">Bulawayo <i>Central Treatment Works</i> <i>Individual Septic Tanks</i></p> <p style="text-align: right;"><u>National (Urban)</u></p>	<p>93% 79% 14%</p> <p>98% 84% 14%</p> <p>95%</p>
<p>Indicator 16: Solid waste Generated Solid waste generated per person in cubic metres and tonnes per annum</p> <p style="text-align: right;">Harare</p> <p style="text-align: right;">Bulawayo</p> <p style="text-align: right;"><u>National urban Value</u></p>	<p>0,79m<sup>3</sup> 0,24 tonnes</p> <p>0,61m<sup>3</sup> 0,18 tonnes</p> <p>0,70m<sup>3</sup> 0,21 tonnes</p>

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUES
<p><b>Indicator 17: Disposal methods for solid waste</b> Proportion of solid waste by weight disposed 10 : a) sanitary landfill, b) incinerated, c) open dump, d) recycled e) other</p> <p style="text-align: center;"><u>Harare</u></p> <p>a) Sanitary landfill 92% b) Incinerated 1% c) Open dump (illegal) 0% d) Recycled 5% e) Other 2%</p> <p style="text-align: center;"><u>Bulawayo</u></p> <p>a) Sanitary landfill 90% b) Incinerated 1% c) Open dump (illegal) 2% d) Recycled 4% e) Other 3%</p> <p style="text-align: center;"><u>National (Urban)</u></p> <p>a) Sanitary landfill 91% b) Incinerated 1% c) Open dump (illegal) 1% d) Recycled 5% e) Other 3%</p>	
<p><b>Indicator 18: Regular solid waste collections</b></p> <p>Proportion of households enjoying regular waste collection</p> <p style="text-align: center;"><u>Harare</u> 100% <u>Bulawayo</u> 90% <u>Gwanda</u> 100% <u>Bindura</u> 86% <u>Gutu-Mupandawana</u> 9,6% <u>National (urban)</u> 95%</p> <p>Median number of times per month waste is collected</p> <p style="text-align: center;"><u>Harare</u> 4 <u>Bulawayo</u> 4</p>	

: Although illegal dumping does take place, waste is subsequently collected by the City and removed to a landfill site.

**Sources:**

1. *Consultant's interviews with local authority officials*
2. *CSO "Census 1992 Zimbabwe National Report"*
3. *Coinreau S.J. "Environmental Management of Urban Solid Wastes in Developing Countries", Urban Development Technical Paper No. 5, World Bank, 1987*
4. *Mwiraria M and Broome J "Municipal Solid Waste Management in Uganda and Zimbabwe", UNDP/World Bank, 1991*
5. *Habitat "Refuse Collection Vehicles for Developing Countries", UNCHS, 1989*
6. *Teyera D.S "Urban Solid Waste Management in Sub-Saharan Africa. An Introduction to Environmental, Financial and Economic Issues", World Bank, 1991*

## **4.2 Rationale Behind Module**

Concern with global degradation of the environment has accelerated in recent years, as the effects of increasing human activity and concentration have become more evident. Monitoring and improving the urban environment in both developed and developing countries has become a major priority.

Solid waste management deals with the generation, storage, collection, transfer and transportation, processing and disposal of solid wastes in an environmentally compatible manner adopting principles of economics, energy and resource conservation.

The resources required for effective solid waste management are considerable and include: personnel, machinery, land, finances and organisation. Three main factors have made greater attention to solid waste management.

- Realisation that inefficient collection and disposal of wastes poses threats to the environment
- Low coverage of areas receiving waste collection services.
- Many local authorities are now finding it difficult to secure appropriate sites for waste disposal within economical distances from the areas of waste generation.

In the absence of a regular solid waste collection system, waste is dumped in open spaces, on access roads and along watercourses. Dumps are invaded by scavengers and animals which scatter the wastes, and so serve as breeding grounds for disease vectors, primarily flies and rats. Leachate from decomposing and putrefying garbage percolates into the soil and nearby water sources. uncollected refuse also finds its way into open drains which become blocked and thereby promote the breeding of mosquitoes.

## **4.3 Analysis of Indicator Values**

### **4.3.1 Percentage of wastewater treated**

Harare and Bulawayo have a fairly mixed population although the settlement pattern is distributed on economic lines i.e low density, high income areas and high density,

low income areas. High density areas have experienced dramatic growth rates since independence due to rural-urban migration. The areas within Harare urban which are serviced by the City of Harare have a very high level of water supply and sanitation service with almost 100% access to piped water. However, when the informal settlement of Epworth is taken into account the figure drops to 89%. Approximately 79% of the city of Harare is served by sewers and central treatment works. This includes the whole of the high density areas. Approximately 14% is served by individual septic tanks. The remainder mostly in Epworth is served by pit latrines (both improved and unimproved).

Bulawayo has a fairly high percentage (98%) of wastewater treatment coverage, with 84% processed in Central Treatment Works and 14% catered for within the plot in individual septic tanks.

#### 4.3.2 Solid Waste Generated

One of the most intractable problems of urban centres is the management of the solid wastes generated within them. The service absorbs a considerable proportion of municipal effort, budget and workforce.

Solid waste generated in urban areas is derived from various sources.

- a) Household waste : In developing countries up to two thirds of this category consists of organic kitchen wastes. The balance is composed of sweepings, rags, paper, cardboard, plastics, bones and metals.
- b) Commercial refuse : Generated from shops, offices, markets, warehouses, hotels etc.
- c) Street sweepings : These consist of sand, stones and litter.
- d) Construction debris : Construction and demolition activities generate a variety of residual building materials which can contribute significantly to quantities of waste.
- e) Industrial waste : Industrial wastes from processing and non-processing industries and utilities are generated in quantities and characteristics to the number of industries and their nature.

From the foregoing urban waste classifications, it is clear that different categories of waste require different handling collection and disposal methods.

### Comparison of Waste Collection and Disposal, Zimbabwe and Uganda

COUNTRY	CITY	SOLID WASTE GENERATED PER ANNUM	SOLID WASTE GENERATED PER DAY	SOLID WASTE GENERATED PER PERSON PER ANNUM	
				Tonnes	m <sup>3</sup>
Zimbabwe	Harare	240 00	700	0,24	0,79
	Bulawayo	150 000	410	0,18	0,61
Uganda	Kampala	200 000	670	0,24	0,79
	Jinja	51 100	140	0,21	0,70

Source:

Mwiraria M, Broome J "Municipal Solid Waste Management in Uganda and Zimbabwe" Washington DC, UNDP/World Bank 1991

It is interesting to note that the solid waste generation in Zimbabwe is comparable to that of other African countries, as the comparison between Harare and Bulawayo and Kampala and Jinja show.

#### 4.3.3 Disposal Methods for Solid Waste

The most widely used method of disposing solid waste in urban centres in Zimbabwe is sanitary landfill.

Sanitary landfill can be defined as the use of solid wastes for land-reclamation, a typical example being the restoration, by filling to the original level, of man-made surface dereliction such as a disused surface mineral excavation. Solid waste may also be used to improve natural features by raising the level of low-lying land to enable it to be used for cultivation or industrial development. Sanitary landfill has the virtue of being a method of refuse disposal which confers environmental improvement. Most solid wastes, however are very offensive materials which provide an attractive habitat for such disease vectors as flies and rodents. Crude dumping, and lack of good management and operation of sanitary landfills can result in a number of hazards:

- fly generation
- encouragement of rodents
- static water pollution and aerial nuisance
- surface water pollution
- fire and smoke pollution

Some pathogen waste (clinical waste) from the major hospitals is incinerated in a separate facility operated by the Ministry of Public Construction and National Housing.

### Industrial Waste

Solid and liquid industrial solid wastes are basically disposed of together with domestic waste. However the disposal of hazardous and toxic wastes requires special permission and registration.

Two landfill sites are in operation in Harare;

- The "Golden Quarry" landfill
- The "Pomona/Teviotdale" landfill

Bulawayo has just opened a new landfill site at Richmond after the one at Pumula East was filled up.

The municipalities of Bulawayo and Harare have established contractual arrangements with private companies for collection of wastes at landfills. Contracts are awarded by tender and are renewable on an annual basis. The volume of wastes recovered at landfills is estimated at about 5% of waste received.

### **Approximate quantities of waste recycled in Harare**

Material	Monthly quantity (tonnes)
Paper	864,0
Plastic	5,7
Cullet	9,6
Glass	3,4
Metal Scrap	28,0
Bones	0,4

In Harare, paper currently accounts for the majority of waste material collected - 864 tonnes per month. Ferrous and non-ferrous metals account for about 28 tonnes per month. Plastics represent a smaller portion of recovered waste (5,7 tons). These amounts fluctuate with summer and winter seasons and are lowest during the rainy season.

#### 4.3.4 Regular Solid-Waste collection

The absence of adequate planning and the use of inappropriate technology has led to a serious wastage of expenditure and effort in solid waste collection. Of the total expenditure incurred in solid waste management, 70 to 80 per cent is directed towards transportation of wastes. The objective of an effective service should therefore be minimisation of solid waste transport costs, with maintenance of an adequate and regular service.

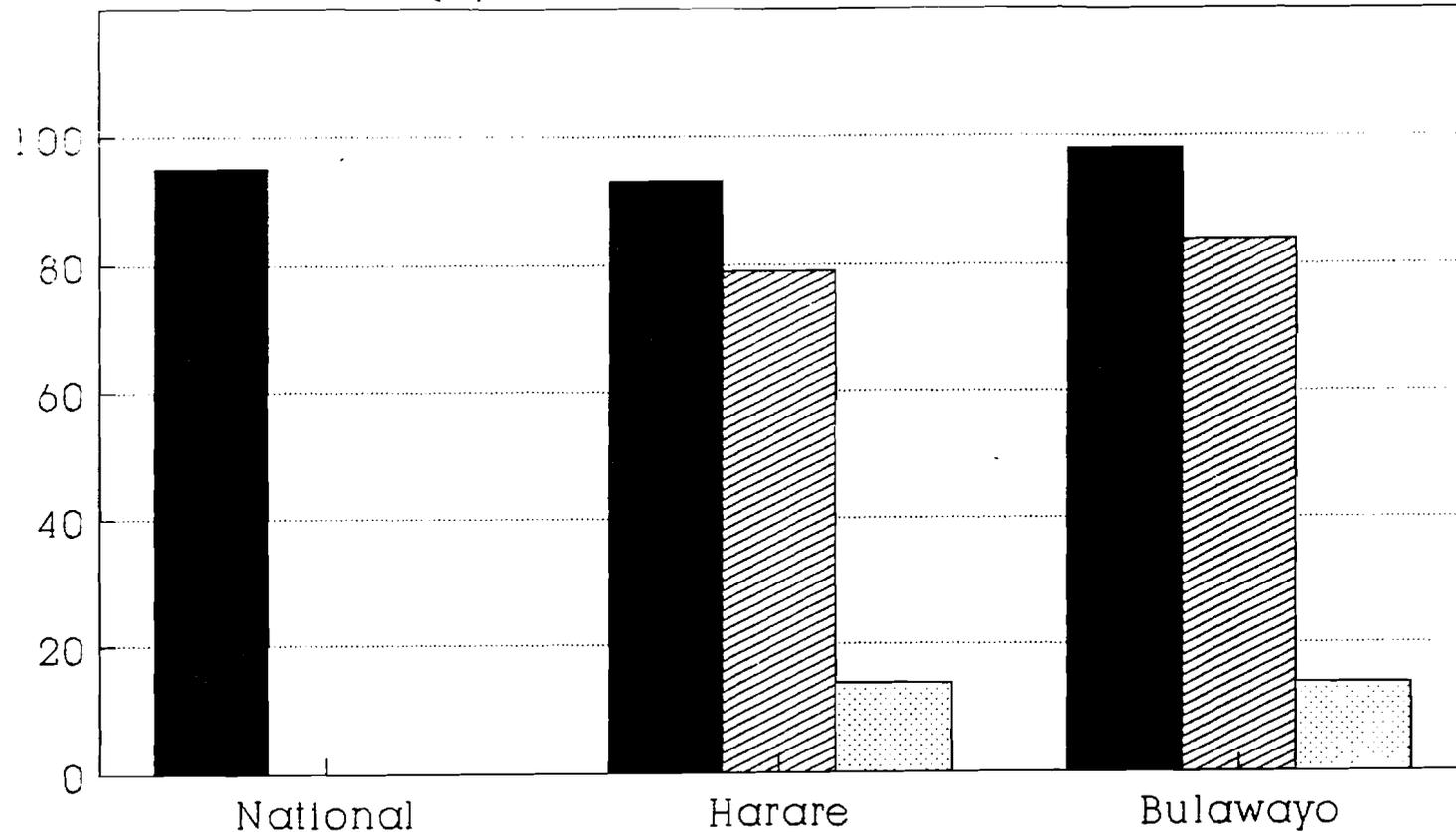
An efficient collection service can only be achieved by a combination of techniques and equipment which are appropriate to the social and cultural factors of the relevant communities.

Domestic service coverage for Harare is almost 100% and 90% for Bulawayo but very much lower (9,6%) in Gutu0Mupandawana which has neither the financial or personnel resources of an urban administration even though it has a larger population than some Town Councils (for example Gwanda).

# Zimbabwe Shelter & Urban Indicator Study

## Indicator 15: Percentage of Waste Water

Indicator Value (%)



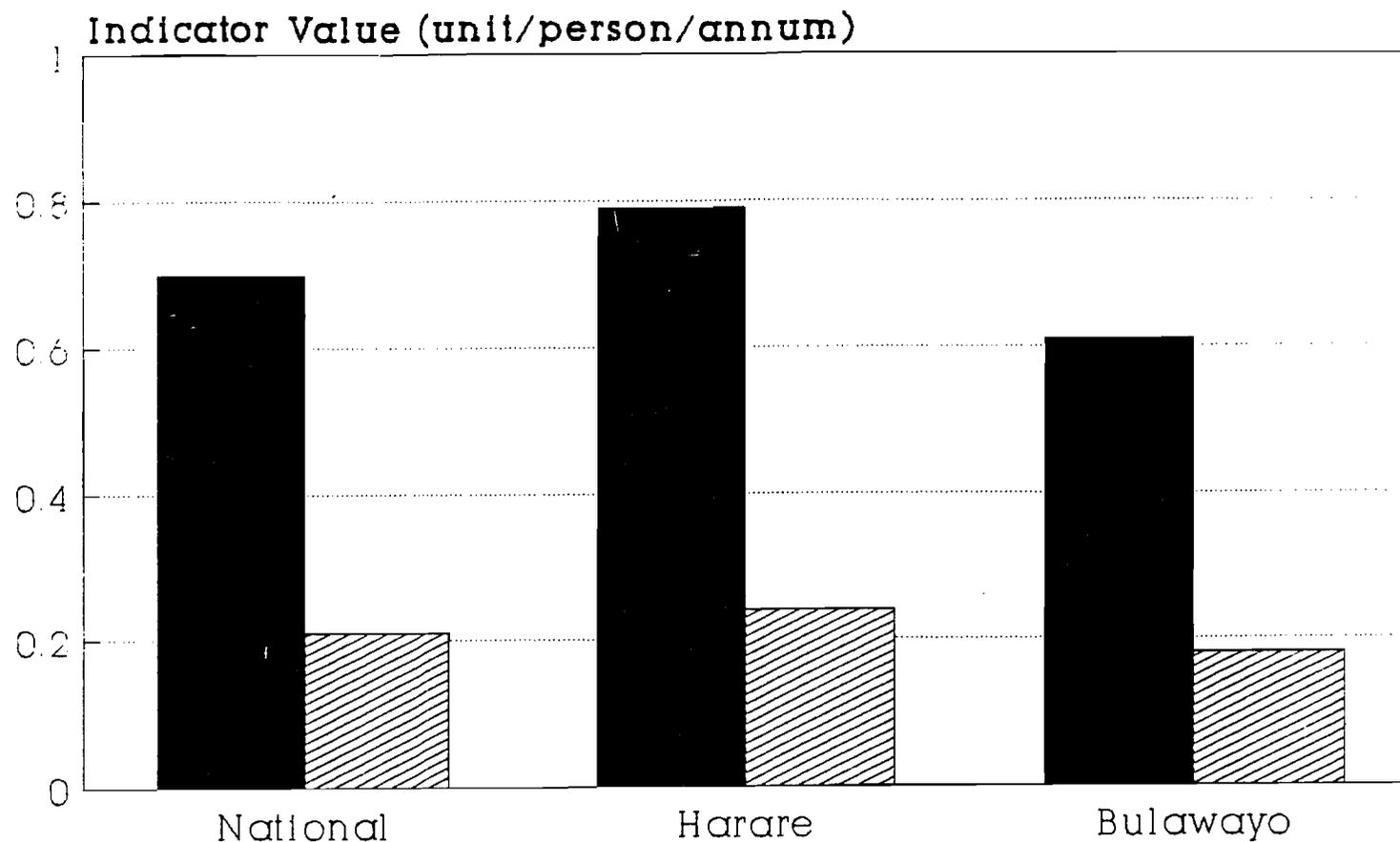
### LEGEND

■ Series 1    ▨ Series 2    ▩ Series 3

Series 1=Total  
Series 2=Central Treatment Works  
Series 3=Individual Septic Tanks

# Zimbabwe Shelter & Urban Indicator Study

## Indicator 16: Solid Waste Generated



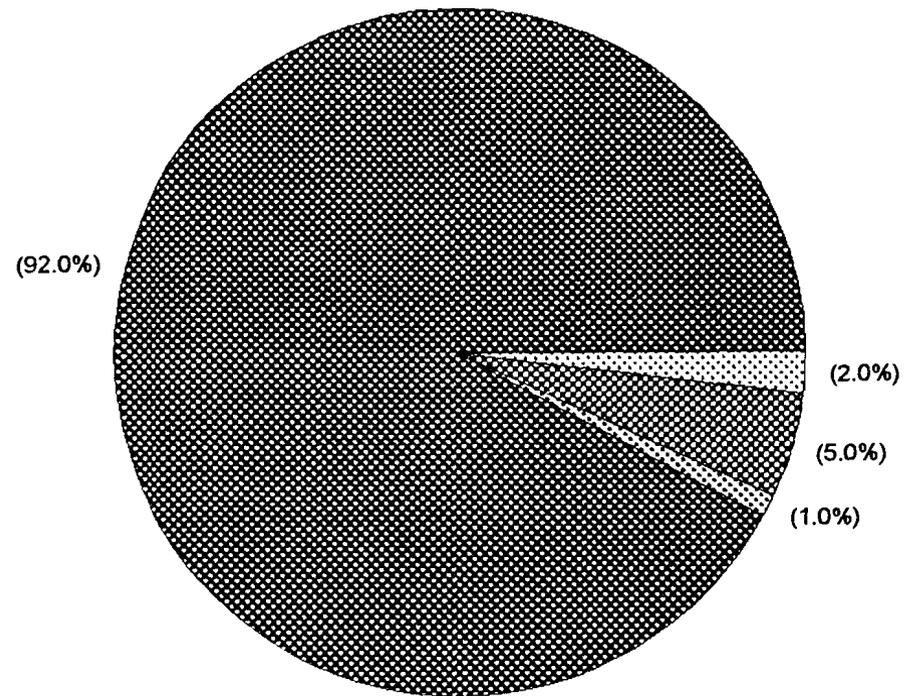
### LEGEND

Series 1= Cubic metres/person/annum

Series 1 Series 2

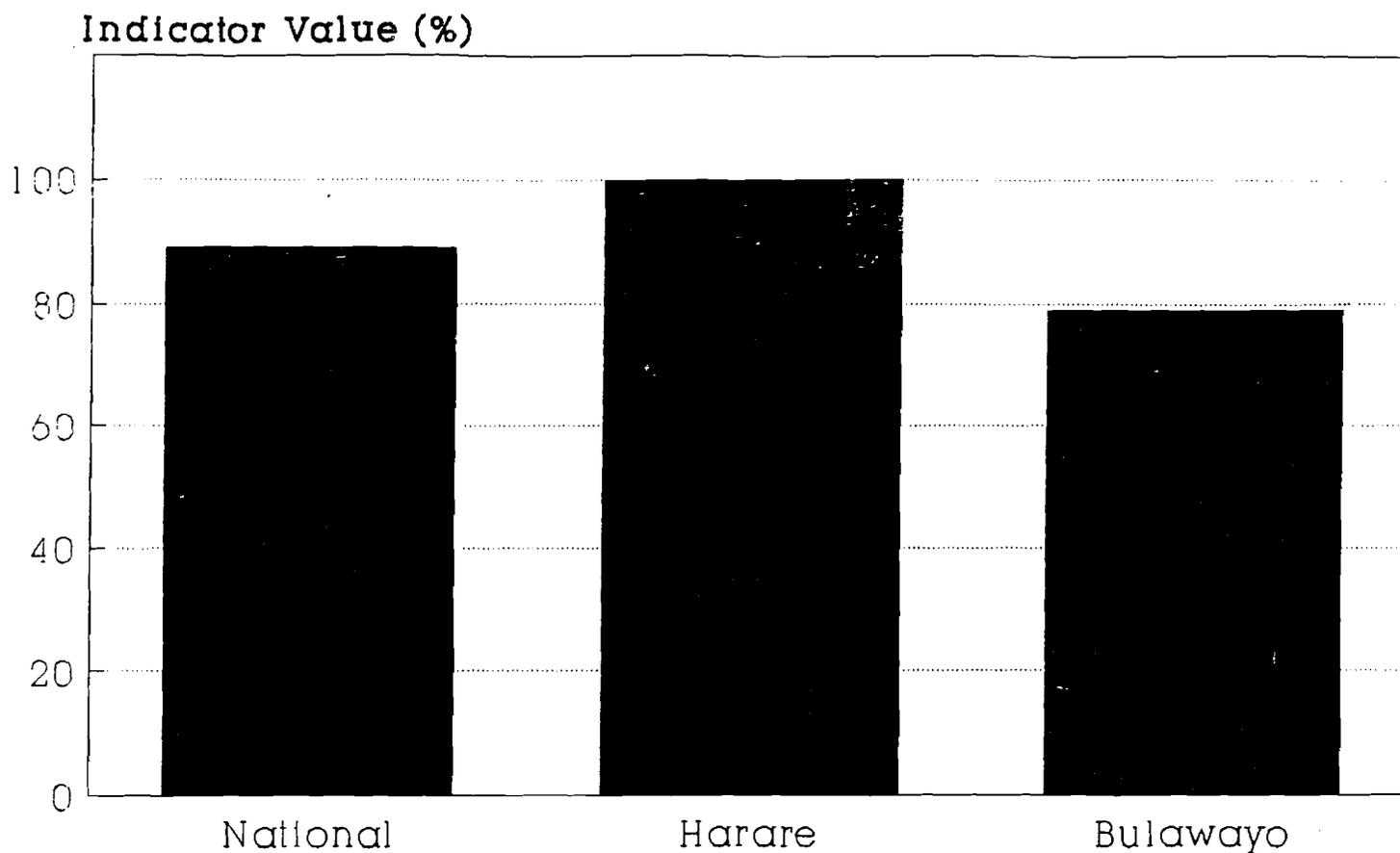
Series 2= Tonnes/person/annum

**INDICATOR 17**  
**HARARE: DISPOSAL METHODS FOR SOLID WASTE**



92% Sanitary Landfill; 1%-Incinerated; 5%-Recycled; 2%-Other

Zimbabwe Shelter & Urban Indicator Study  
Indicator 18: Regular Waste Collection



Footnote

Series 1= Proportion of h/holds enjoying waste collection

MODULE 5 : LOCAL GOVERNMENT

5.1

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
<p>20.1. Local Government per capita income: <i>Total local government sources of funds (in US\$) annually, both capital and recurrent for the metropolitan area divided by population (three years average).</i></p>	<p>Harare: Z\$ 479,68 (US\$ 70,03)</p>
<p>20.2. Major sources of income: <i>Percentage of <u>local government</u> income by source:</i>  <i>a) Taxes (Rate &amp; supple c)</i>  <i>b) User-charges</i>  <i>c) Rents</i>  <i>d) Water sales</i>  <i>e) Other/loans</i></p>	<p><b>Harare:</b>  30%  13%  8%  32%  17%</p>
<p>21. Per capita capital expenditure: <i>Capital expenditure (in US\$), by all local governments in the metropolitan area, averaged over the last three years per person.</i></p>	<p>1992/93 - 1994/95  Harare: Z\$428,80  (US\$ 62,60)</p>
<p>22. Debt service charge ratio: <i>Total principal and interest repaid, including bond maturations, as a percentage of total expenditure by local governments.</i></p>	<p>Bulawayo: 9,8%  Harare: 55% (22%)</p>
<p>23. Local government employees: <i>Total local government employees per 1000 population.</i></p>	<p><u>1995:</u>  Bulawayo: 7500  = 8,27/1000  (10,13/1000)  Harare: 10 500  = 5,6/1000  (8,2 prior to  City Marketing  privatisation)</p>

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUES
<p>24. Personnel expenditure ratio: <i>Proportion of recurrent expenditure spent on wage costs.</i></p>	<p><u>1995:</u> Harare: 52% Bulawayo: 35% Bindura 28.8% Gwanda 30% Kwekwe 32%</p>
<p>25. Contracted recurrent expenditure ratio: <i>Proportion of recurrent expenditure spent on contracted activities.</i></p>	<p>0.04%</p>
<p>26. Government level providing services</p> <ul style="list-style-type: none"> <li>- Water</li> <li>- Sewerage</li> <li>- Refuse collection</li> <li>- Electricity</li> <li>- Telephone</li> <li>- Public transport</li> <li>- Fire/ambulance</li> <li>- Road maintenance</li> <li>- Education</li> <li>- Health care</li> <li>- Public housing</li> <li>- Recreation/sports</li> </ul>	<p>la (bulk:cg) la la la/s pub cg cg/pvt la/pvt la la/cg/pvt la/cg/pvt la/cg/pvt la/cg/pvt</p>
<p>27. Control by higher levels of government:</p>	<p>Some</p>

Sources:

1. Consultant's interviews with local authority officials
2. City of Bulawayo "Financial Statements", 1992-93, 1993-94
3. C. C. Kariza "Decentralisation and Formulation of a Framework for the Empowerment of Local Authorities", 1995

## 5.2 Rationale Behind Module

The functioning of the city depends to a large extent on the effectiveness of its local government and the quality and costs of services and infrastructure that it provides. The indicators in this module relate to financial resources and sustainability, the provision of services and independence from higher levels of government. There are also measures of the productivity in local government and the extent of involvement of the private sector.

### 5.3 Analysis of Indicator Values

5.3.1 The *local government per capita income* has a direct bearing on the quality and cost of services that the cities provide to their residents. The per capita expenditure in Harare has been substantially higher than in Bulawayo over the past three years because of major long-term infrastructural investments undertaken in the last ten years and which is just peaking now (for example duplicating the Morton Jaffrey sewerage works, constructing feeder trunk mains and similar). Such major works are usually only required every 30 to 40 years.

5.3.2 The *sources of incomes* for urban local authorities in Zimbabwe have historically been diverse, generally representing a sustainable revenue base.

In the majority of urban centres, a principal source of revenue is property tax (rates on land and improvements in low and medium density residential, commercial and industrial areas and fixed supplementary charges for stands in high density residential areas). This amounted to an average per capita annual income of Z\$134,06 (for 22 towns) for 1995/96. (Interview with Programme Coordination and Monitoring Unit, Ministry of Local Government, Rural and Urban Development).

In the past two years, in the case of Harare, the sale of water (to consumers within the municipal area as well as to adjacent nearby satellite towns) has surpassed rates as a source of income.

Until recently, local authorities (notably Harare and Bulawayo) levied and collected a 10 percent surcharge on all electricity consumers on behalf of the parastatal supply utility ZESA. (In the case of Harare this was on average Z\$60 million per annum).

A further major source of income is user (owner charges) for water, sewerage and refuse collection. In 1995/96 the 22 main urban centres will raise an average Z\$ 285,48 per capita from this source. (PCMU/MLGRUD).

Further sources of revenue include cattle sales (from cattle farms associated with sewerage works); fees (e.g. vehicle licences, electricity charges, etc); rents from commercial and residential properties owned by the municipalities; site rents (for the lease of undeveloped land); business licences; liquor licences; clinic and hospital fees; central government dues.

However the financial situation of local authorities in Zimbabwe has deteriorated over the past two years; and very few still have reserve funds. This has resulted because of the increase of functions of local authorities and rapid growth of urban centres on the one hand and the imposition by central government of excise duty on opaque beer - a strong source of local authority

revenue in the past.

Central government generally pays local authorities annual dues towards roads maintenance and for health and education facilities. In Zimbabwe, as in many other countries in sub-Saharan Africa, central government does not pay rates to local authorities on properties which it owns - which can be substantial (see indicator RA2). In the 1930s there was a government circular which committed central government to paying an amount worth two thirds of rates due. However this principle has never been enacted and over the past five years, no payments in lieu of rates have been forthcoming from central government. Furthermore central government dues with respect to health services have also substantially decreased in the recent past. In 1980, central government met approximately 85 percent of health costs in the City of Harare but this has been reduced to 0 in 1990. Similarly as of 1 January 1985, all primary schools in urban areas became the responsibility (both administratively and financially) of the local authorities.

- 5.3.3 The *debt service charge ratio*, as a measure of the debt burden of local government was relatively low and sustainable in both Harare and Bulawayo during the 1980s. The cities tried to cap the ratio at around 25 percent. However, the Councils do have some long term debt and with falling central government contributions, are having to eat into their reserves. In the recent past, Harare's ratio has been as high as 55% due to large scale capital expenditures on long term bulk infrastructure requirements.
- 5.3.4 The *number of local government employees per 1000 population* for both Harare and Bulawayo were at similar levels (8,2/1000) in the past. The ratio in Harare has fallen further to 5,6 with the recent privatisation of City Marketing, a successful opaque beer sales undertaking, which employs approximately 1600 people.
- 5.3.5 Although the number of employees per population might appear to be relatively low, the *personnel expenditure ratio* of 52% for Harare and 35% for Bulawayo is high and well above the 25% cap called for by central government as part of the national structural adjustment programme.
- 5.3.6 An actual figure for *the contracted recurrent expenditure ratio* is a very low 0,04% in Harare. This is an area in which Zimbabwean urban local authorities are only now beginning to explore. In the past the local authorities have had the capacity and resources to perform all major urban management and urban development tasks in-house or else have made use of (subsidies) central government services.

However, there is now a growing awareness that some services can be contracted out either more efficiently or at a lower cost. The City of Harare

has recently contracted out the management of its two main solid waste dump sites. The City of Bulawayo has long made use of the private sector to fit and supply elements in its turnkey low cost housing projects.

5.3.7 *Indicator 26* shows the strength of local authorities (as opposed to central government) in being the main providers of all main urban services. Increasingly too, the private sector is becoming involved in areas such as education, health care, low cost housing, recreation and sports facilities and ambulance services.

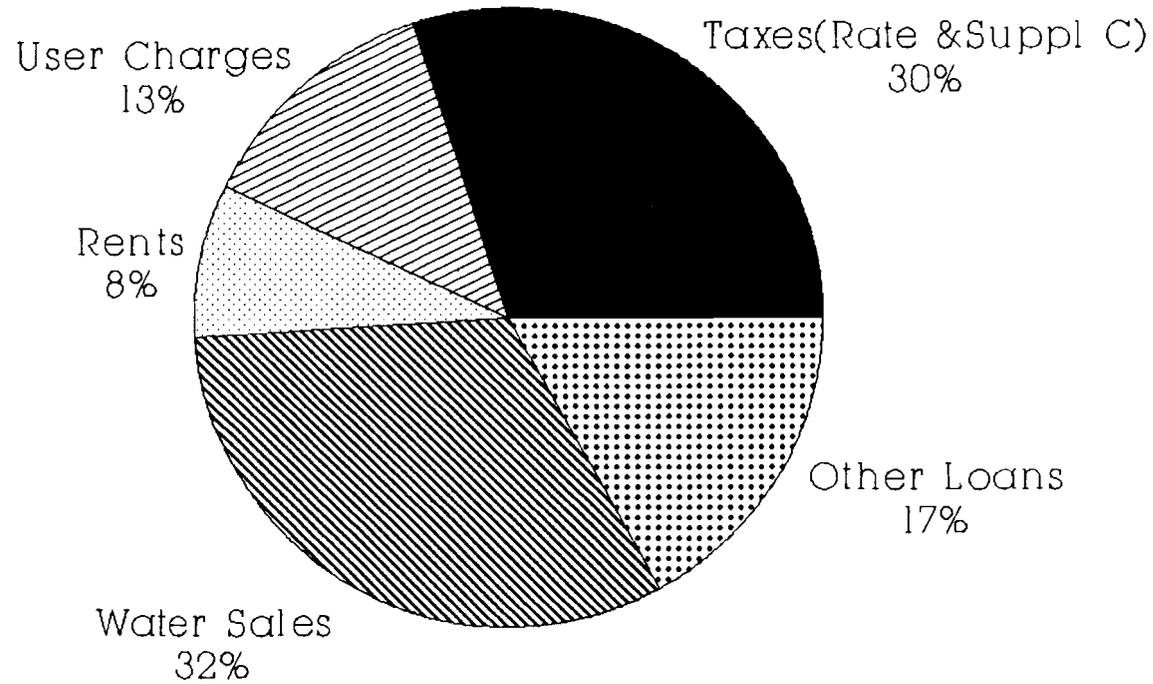
5.3.8 Despite the strength of local authorities, central government still maintains relatively strong control over the activities of lower tiers of government.

It is legally possible for central government to both close a local government or remove some councillors from office if it believes it necessary to do so. A local authority is only able to suspend an official and only central government (on advice to the President and in terms of the new Local Government Act, the Minister) has the power to fire an official.

Local authorities also require central government authority to set supplementary charges, some user charges and to borrow funds. However they have the authority to contract out projects on a competitive tender basis.

Transfers from central government to the local authority are usually not known in advance of the local budget setting process and are often amended at short notice.

Zimbabwe Shelter & Urban Indicator Study  
Indicator 20.2: Major sources of Income



National Urban

MODULE 6 : HOUSING AFFORDABILITY AND ADEQUACY

6.1

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
<p><b>H1.</b> House price to income ratio: <i>Ratio of the median free-market price of a dwelling unit and the median annual household income.</i></p>	<p>1992: 7,3 1994: 6,6</p>
<p><b>HA31.</b> Construction price and cost: <i>Present replacement cost (i.e. new dwelling unit) (labour, materials, on-site infrastructure, management and contractor profits) per sq. metre of a median priced dwelling unit.</i></p>	<p><u>1992:</u> Z\$ 24 527 (P) Z\$ 20 944 (C) <u>1994:</u> N/A (P) Z\$ 22 847 (C)</p>
<p><b>Down-Market Penetration:</b> <i>Ratio of lowest priced (unsubsidized) formal dwelling unit produced by the private sector (not less than 2% of annual housing production) and the median annual household income.</i></p>	<p>1992: 2,7 1994: 3.1</p>
<p><b>H2.</b> House rent-to-income ratio: Ratio of median annual rent of a dwelling unit and the median annual household income of renters.</p>	<p><u>1994:</u> Harare: 0,44</p>
<p><b>H3.</b> Floor area per person: Median usable living space per person (m<sup>2</sup>).</p>	<p>Median owner h/holds - 8m<sup>2</sup> median lodger h/holds - 3m<sup>2</sup></p>
<p><b>H4.</b> Permanent Structures: Percentage of housing units located in structures expected to maintain their stability for 20 years or longer under local conditions with normal maintenance.</p>	<p><u>1993:</u> National urban: 94,4% <u>1992:</u> Harare: 87,8% Bulawayo: 96,8%</p>

<b>H5. Housing in Compliance:</b> <i>Percentage of total housing stock in compliance with the current regulations.</i>	<u>1992:</u>
	Harare: 87,8%
	Bulawayo: 96,8%

Sources:

1. CSO "Census 1992 Zimbabwe National Report"
2. Consultant's interviews with local authority officials
3. PADCO Inc. and Plan Inc. "Zimbabwe Private Sector Housing Program Monitoring and Evaluation System", for USAID/Harare and MPCNII
4. CSO "Census 1992 Provincial Profile Bulawayo"
5. CSO "Census 1992 Provincial Profile Harare"
6. CSO "Indicator Monitoring Survey 1993"

## 6.2 Rationale Behind Module

A major concern of the Government of Zimbabwe is to ensure that all households have access to adequate housing at an affordable price.

In a well functioning housing market, housing expenditures should not take up an undue portion of household incomes. If they do, it is an indication of underlying problems which are either restricting the supply of adequate volumes of housing (increasing the prices) or of problems which restrict household affordability levels.

The first four indicators in this module, are key measures of affordability. The final three indicators deal with the adequacy of both formal and informal housing.

## 6.3 Analysis of Indicator Values

6.3.1 The *house price-to-income ratio* provides a particularly clear view of the overall performance of the housing market. It is a measure of the ratio between the median free-market price of a dwelling unit and the median annual household income. Clearly the higher the ratio, the greater the strain on affordability of housing.

The house (superstructure) price-to-income ratio was calculated for both Harare and Bulawayo for the years 1992 and 1994. The median dwelling units (on a scale ranging from informal housing through to low density, luxury units), lies within the range of a four-roomed, permanent house (plinth area 50m<sup>2</sup>).

In 1992 the ratio was 9.8 in Harare and 4.7 in Bulawayo<sup>9</sup>, i.e. the median

<sup>9</sup> PADCO Inc. and Plan Inc. P/L "Zimbabwe Private Sector Housing Program Monitoring and Evaluation System, Baseline Survey and Findings", prepared for GOZ and USAID/Zimbabwe, Nov. 1994.

household in Harare must pay 9.8 times its annual income to purchase the median priced house. Not only does Harare compare unfavourably with Bulawayo, but the average of the two cities (7,3) is substantially higher than the sub-Saharan Africa ratio which in 1992 was of around one<sup>10</sup>.

The reasons behind this unfavourable ratio are complex but are primarily a consequence of the great shortage of houses in the cities. The shortage is a result of among other things an inefficient land delivery system and a shortage of housing finance. Both are affected by inappropriate regulatory requirements.

- 6.3.2 However it is important to note that the high house price-to-income ratio is not due to prohibitively expensive *construction prices and costs*. The house price-to-income ratio is measured as the price at which an existing (median priced) house would sell if placed on the market for a reasonable length of time by a seller who is not under pressure to sell. However the construction price refers to a median priced new dwelling unit. It is therefore a measure of either the efficiency or monopolistic practices in the housing sector. It also measures shortages of capital inputs, shortages of skilled labour, inappropriate building technology and similar. The construction cost and price of new units is not prohibitively high in comparison to household incomes (see down-market penetration indicator below), reflecting that the building technologies used (primarily kiln fired bricks, asbestos roofs) are appropriate and affordable.

The difference between the actual construction cost and construction price is an indication of contractor profits.

In 1992, profits in Harare on a median priced new dwelling unit stood at a high 40 percent. In the same year in Mutare, profits were 21 percent. The key to reducing both construction costs and prices lies in a greater involvement by the private sector (including small-scale contractors) in lower income housing (when the median priced unit lies). This should stimulate greater competition which would result in turn in more efficient construction methods and a reduction in profit margins.

- 6.3.3 Deriving from the construction cost is *down-market penetration*<sup>11</sup> - a key measure of affordability of new housing construction. The indicator represents the ratio of the lowest price of a dwelling unit produced by private builders to the median annual household income. The lower the ratio the more affordable

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<sup>10</sup> UNHCS/World Bank "Indicators Programme: Monitoring the Shelter Sector", Volume 3, p 25, Feb 1995.

<sup>11</sup> Both the values and analysis of this indicator are sourced from:  
PADCO Inc. and Plan Inc. P/L "Zimbabwe Private Sector Housing Program Monitoring and Evaluation System, Baseline Survey and Findings", prepared for GOZ and USAID/Zimbabwe, Nov. 1994.

are some of the new dwelling units produced.

In 1992 the values for the down-market penetration indicator were 2.7 and 2.6 for Harare and Bulawayo. This shows a high level of affordability and well below the average world-wide value of 4.4. The value increased slightly to an average 3.1 in 1994 but still demonstrates that at least some affordable housing was indeed produced.

In summary, there are indications that affordable housing can be and is being built in urban centres in Zimbabwe, but in very low volumes. (See Indicator H9). These low production levels, coupled with rapid urban population growth (see Indicator D3) have resulted in acute shortages of housing which have artificially but dramatically increased the market price of housing.

- 6.3.4 Only 30 percent of households in urban areas are owners or are in the process of purchasing their houses<sup>12</sup>. A full 40 percent are lodgers (renting one or more rooms in a dwelling but with no written agreement or documents in the lodger's name). The remaining households live in tied accommodation (owned by an employer) or some other arrangement. The *rent price-to-income ratio* therefore reflects on a greater number of households at the present time than the house price-to-income ratio and is a key measure of housing affordability.

As in the case of house price-to-income ratio, housing expenditures should not take up an undue proportion of a household's income.

The rent price-to-income ratio in Harare is currently a high 0,44. In other words the median renting/lodging household pays an estimated 44 percent of its income on rent payments. This is substantially higher than the 25-30 percent of household income that Building Societies use to calculate what a household can afford when taking out a mortgage facility to buy a house.

The rent-to-income ratio has increased substantially in the last five years (it was reported as 0,14 in 1992) and particularly so in Harare. In Harare in 1987 a room in the high density (low income) suburbs would have been rented out at Z\$45 per month. By 1994 the same room cost Z\$200 per month - an increase of 430% during a period in which real incomes have declined<sup>13</sup>.

The reason for this increase has been the shortage of new housing on the market either for sale or rent. As the permanent housing stock bursts at the seams, a proliferation of backyard shacks (*tangwenas*) and rooms have been built in both high and low density suburbs alike for rental purposes. In 1987

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<sup>12</sup> CSO "Census 1992 Zimbabwe National Report", Table 7.1.

<sup>13</sup> Plan Inc. Zimbabwe "Study of Informal Settlements in Greater Harare", prepared for ZIRUP and USAID/Zimbabwe, December 1994.

in Harare it was estimated that there were 162,112 people living in outbuildings - or 20 percent of the city's population<sup>14</sup>.

Other problems associated with lodging (over and above the high rent price-to-income ratio) is that the average lodger moves about three times a year<sup>15</sup> - landlords are fickle as regards tolerating small children and there are inevitably personality clashes in an overcrowded homestead.

- 6.3.5 The severe shortage of supply of housing in all Zimbabwe's urban centres has led to a low figure for *floor area per person* which directly measures the adequacy of living space in dwellings.

The median floor area per person has been a difficult indicator to calculate, given the large range of sizes of shelter found not only between high and low density suburbs (where typical shelter units are 50m<sup>2</sup> and 180m<sup>2</sup> respectively) but also within the high density suburbs themselves where 80 percent of the housing stock is located. Also overcrowding is substantially worse in Harare than any other urban centre, including Bulawayo.

A household survey of high density suburbs in Harare and Marondera in 1992<sup>16</sup> found the average occupancy rate to be 3,4 households per stand in Harare but a lower 1,6 households per stand in Marondera. The average lodger household, whatever its size, typically rents and lives in one single room (9-12m<sup>2</sup>). The average owner household (size: 6 people) enjoys the use of four rooms.

Floor area per person in the high density suburbs, where one finds the median sized house, varies from approximately 2m<sup>2</sup>/person to 8m<sup>2</sup>/person.

The range of typical floor area per person in Bulawayo's high density suburbs is similar to that found in Harare and Marondera - it lies anywhere between 2,4m<sup>2</sup> - 4,4m<sup>2</sup> per person in the older suburbs to 2,8m<sup>2</sup> - 8,3m<sup>2</sup> in the more recently developed areas.

In terms of Statutory Instrument 185, 3,6m<sup>2</sup> floor space per adult and 1,8m<sup>2</sup> per child is the laid down minimum for building plan approval - a higher standard than enjoyed by most lodger households. Once plans are approved there is little to prevent an owner household from letting out single rooms to lodger families - this is commonly practised. Furthermore outbuildings

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<sup>14</sup> Rakodi C. & Withers P. "Land Housing and Urban Development in Zimbabwe", Occasion Papers in Planning Research, University of Cardiff, 1993.

<sup>15</sup> Plan Inc "Zimbabwe Private Sector Housing Program: Household Incomes/Expenditures Survey", USAID, 1992.

<sup>16</sup> Plan Inc Zimbabwe P/L "Zimbabwe Private Sector Housing Program: Household Incomes/Expenditure Survey", USAID/Zimbabwe, February 1992.

(comprising an estimated 30% of the housing stock in Harare's high density suburbs) are usually unauthorised structures for which building plans have not been approved.

It is interesting to note that in the informal settlements found in the greater Harare area (housing an estimated 110,000 people), there is an average 4-6m<sup>2</sup> floor space per person. Conditions are less overcrowded than in the formal sector, permanent housing areas.

- 6.3.6 The *percentage of permanent housing structures* is higher in Bulawayo and other secondary centres than in Harare. An estimated 96,8% of households in Bulawayo (and 96,4% in all urban centres) live in "modern" structures built of durable materials<sup>17</sup>.

In Harare, a lower 87,8% of the housing stock is of permanent, durable materials. In the past five years the high density formal housing areas in Harare have reached saturation point with respect to occupancy rates. There is now an increasing trend of less durable outbuildings being constructed for rental purposes as well as a mushrooming of informal settlements particularly just outside of the municipal boundary. (An estimated 110 000 people live in informal settlements in the greater Harare area whereas an estimated 7 400 people live in informal settlements in and around Bulawayo).

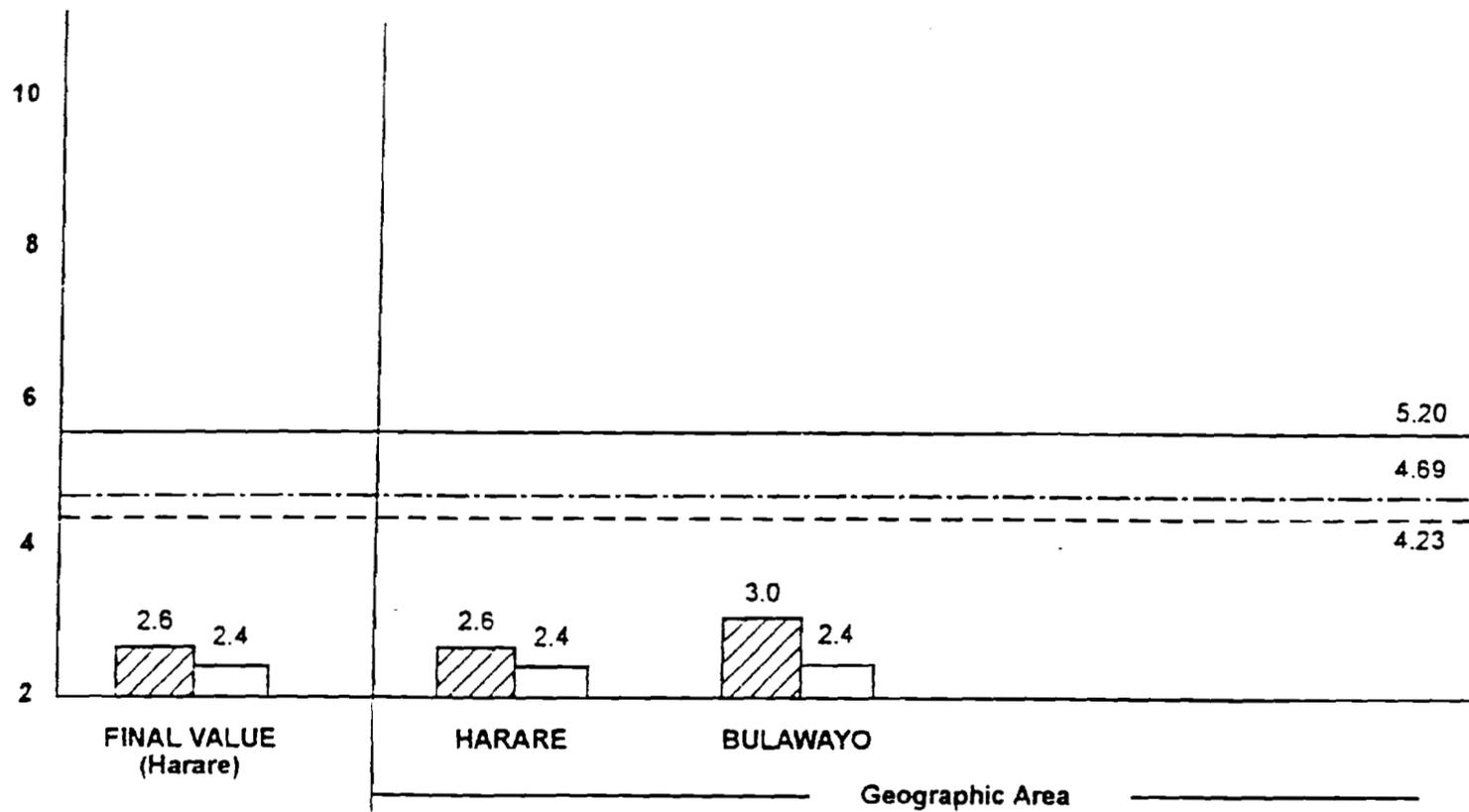
- 6.3.7 The percentage of total *housing stock in compliance* with the current regulations is similar to the percentage of permanent structures.

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CSO "Indicator Monitoring Survey", 1993 Table 7.5  
CSO "Census 1992 - Provincial Profile Bulawayo:."

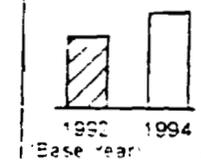
INDICATOR VALUES



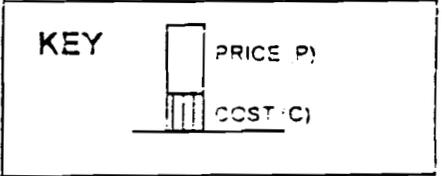
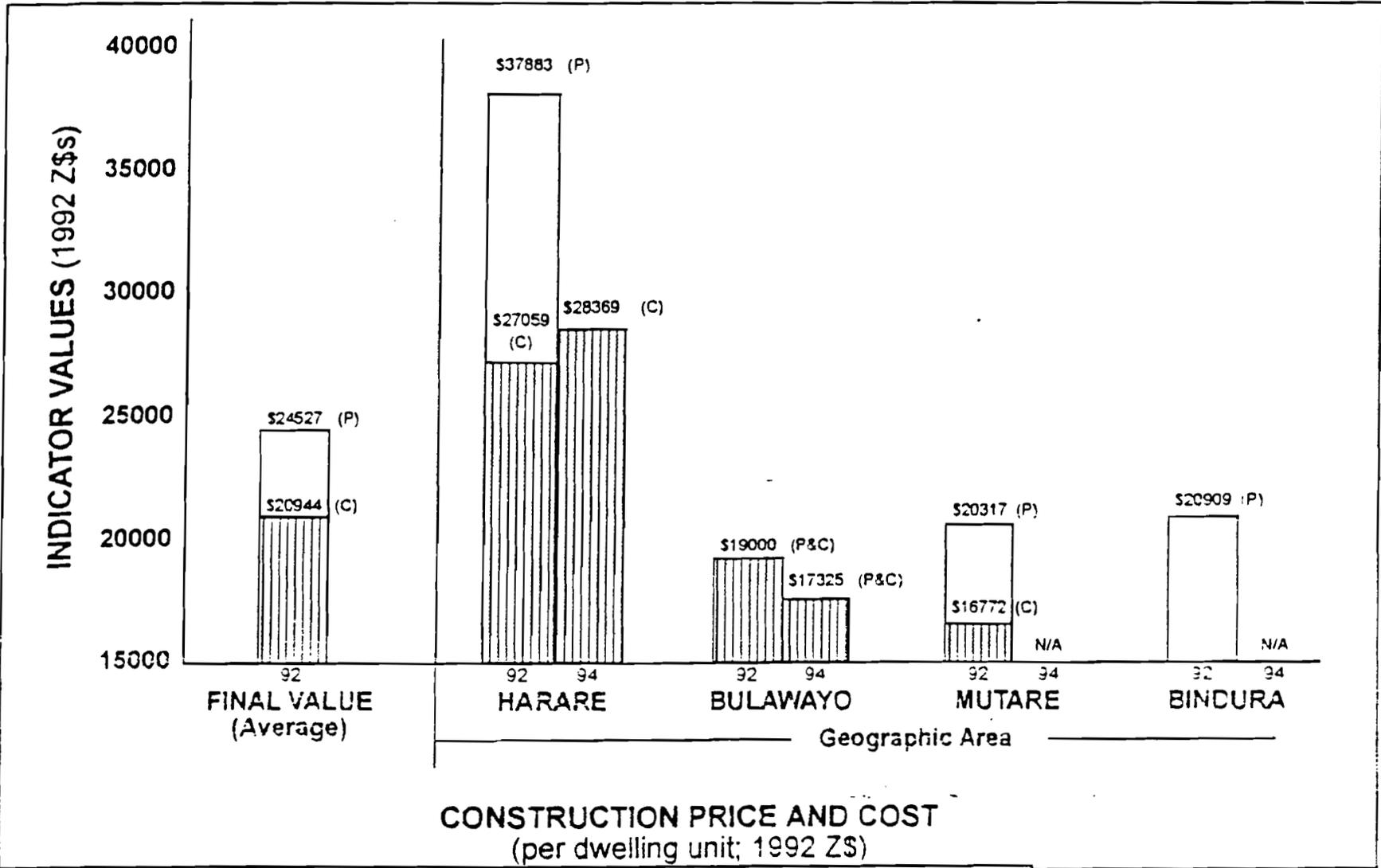
HOUSEHOLD DWELLING UNIT PRICE-TO-INCOME RATIO

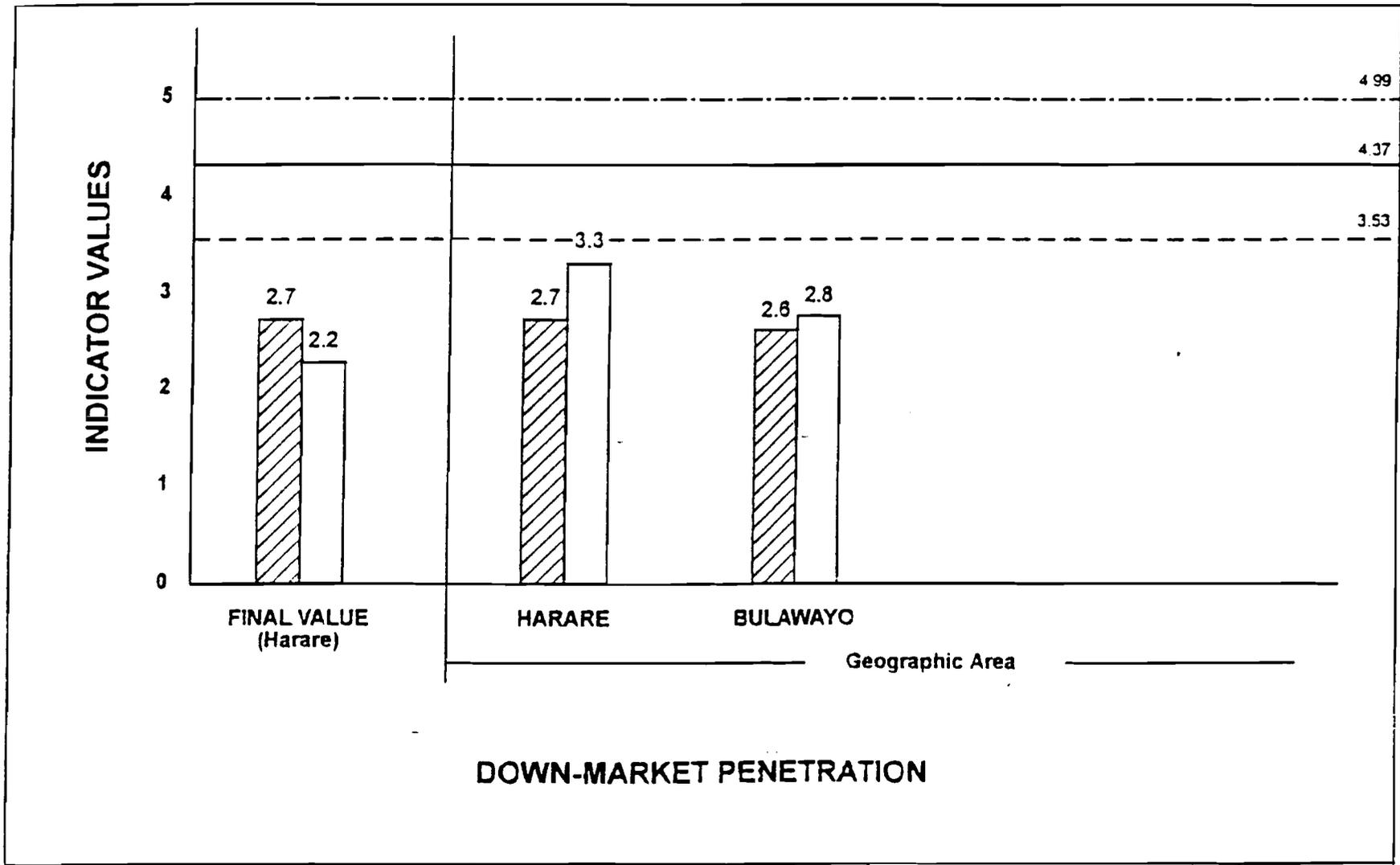
KEY

Worldwide Average ———  
 Sub-Saharan Average - - - -  
 Income Group Average - · - · -  
 Source: IBRD/UNCHS 1993  
 (1991/92 data)



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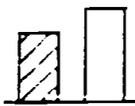


**DOWN-MARKET PENETRATION**

**KEY**

- SUB-SAHARAN AVG.
- WORLDWIDE AVG.
- - - - - INCOME GROUP AVG.

Source: 'BROADUNCHS' 1992 (1991/92-1993)



1992 1994

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MODULE 7 : HOUSING PROVISION

7.1

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE															
<p><b>H6.</b> Land development multiplier: Average ratio between the median land price of a developed plot at the urban fringe in a typical subdivision and the median price of raw, undeveloped land with planning approval in an area currently being developed.</p>	<p>1,60 (medium income area only)</p>															
<p><b>H7.</b> Infrastructure Expenditure: <i>Ratio of the total expenditures (operations, maintenance and capital) by all levels of government on infrastructure services during the current year, and the urban population.</i></p>	<p>Harare (excluding parastatals) US\$ 69,50/capita Roads: 13% Sewerage: 7% Water: 27% Waste Mgt: 4% Health: 14%</p>															
<p><b>H8.</b> Mortgage to credit ratio: <i>Ratio of total mortgage loans to all outstanding loans in both commercial and government financial institutions.</i></p>	<p>1992: 77,32% 1993: 59,74%</p>															
<p><b>H9.</b> Housing Production (Low income): <i>Total number of housing units (in both the formal and informal sectors) produced in the previous year per 1000 population.</i></p>	<table border="0"> <thead> <tr> <th></th> <th style="text-align: center;"><u>1992</u></th> <th style="text-align: center;"><u>1993</u></th> </tr> </thead> <tbody> <tr> <td>Harare :</td> <td style="text-align: center;">0.45</td> <td style="text-align: center;">n/a</td> </tr> <tr> <td>Bulawayo :</td> <td style="text-align: center;">0.40</td> <td style="text-align: center;">n/a</td> </tr> <tr> <td>Mutare :</td> <td style="text-align: center;">3.03</td> <td style="text-align: center;">1.24</td> </tr> <tr> <td>Bindura :</td> <td style="text-align: center;">0.33</td> <td style="text-align: center;">1.67</td> </tr> </tbody> </table>		<u>1992</u>	<u>1993</u>	Harare :	0.45	n/a	Bulawayo :	0.40	n/a	Mutare :	3.03	1.24	Bindura :	0.33	1.67
	<u>1992</u>	<u>1993</u>														
Harare :	0.45	n/a														
Bulawayo :	0.40	n/a														
Mutare :	3.03	1.24														
Bindura :	0.33	1.67														
<p>Stand Production (Low income): <i>Number of stands that are serviced and ready for sale to less-than-median income families per 1000 population.</i></p>	<table border="0"> <thead> <tr> <th></th> <th style="text-align: center;"><u>1992</u></th> <th style="text-align: center;"><u>1993</u></th> </tr> </thead> <tbody> <tr> <td>Harare :</td> <td style="text-align: center;">1.08</td> <td style="text-align: center;">0.89</td> </tr> <tr> <td>Bulawayo:</td> <td style="text-align: center;">6.72</td> <td style="text-align: center;">2.39</td> </tr> <tr> <td>Mutare :</td> <td style="text-align: center;">2.29</td> <td style="text-align: center;">6.99</td> </tr> <tr> <td>Bindura :</td> <td style="text-align: center;">0.00</td> <td style="text-align: center;">0.00</td> </tr> </tbody> </table>		<u>1992</u>	<u>1993</u>	Harare :	1.08	0.89	Bulawayo:	6.72	2.39	Mutare :	2.29	6.99	Bindura :	0.00	0.00
	<u>1992</u>	<u>1993</u>														
Harare :	1.08	0.89														
Bulawayo:	6.72	2.39														
Mutare :	2.29	6.99														
Bindura :	0.00	0.00														

<p><b>H10. Housing Investment:</b> <i>Total investment in housing (in both the formal and informal sectors) as a percentage of gross domestic product.</i></p>	<p><u>1990:</u> Harare: 4,22% Bulawayo: 2,68%</p>
--	---

Sources:

1. PADCO Inc. and Plan Inc. "Zimbabwe Private Sector Housing Program Monitoring and Evaluation System", for USAID/Harare and MPCNH
2. CSO "Census 1992 Zimbabwe National Report"
3. Consultant's interviews with local authority officials and private developers

## 7.2 Rationale Behind Module

The system by which housing is provided is a complex inter-relationship between the land delivery and land development system, the construction industry, housing finance, government involvement through taxes, subsidies and public housing, and the regulatory system.

Indicators in this module look at the efficiency of the housing delivery system in Zimbabwe as finally encapsulated in the final three indicators which measure in real terms the numbers of houses and serviced stands being delivered in urban areas and the priority placed on housing investment in relation to the gross domestic product of cities.

## 7.3 Analysis of Indicator Values

7.3.1 The *land development multiplier* is a comparison between the median price of raw land and the median price of serviced land, where planning permission is given, on the fringe of the urban area. It is therefore a measure of the price premium of servicing a block of stands, i.e. the servicing costs (including project management) of land plus any premium associated with bottlenecks in the development process.

In Harare data was not available for the median land development multiplier. However in medium density residential development undertaken by private developers, the indicator was 1.6 in 1994. The land development multiplier by private developers appears to be low because historically all land servicing has been done by the public sector and servicing costs are subsidised.

Studies carried out elsewhere in the country<sup>18</sup> have indicated that servicing costs incurred by local authorities are subsidized by some 30 percent. Central

18

See for example, Plan Inc. Zimbabwe P/L "Chiredzi - Lessons of Experience", for USAID/Zimbabwe, 1993.

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government servicing costs may be as high as 100 percent<sup>19</sup>.

Whilst the short term effects of the public subsidy is to make serviced land affordable to lower income households, the longer term impact has been lack of financial resources on the part of local authorities and central government to sustain the subsidies while at the same time undermining the capacity and enthusiasm of the private sector to become involved in residential developments (see indicators H9 and H9A).

- 7.3.2 The *infrastructure expenditure per capita* indicator measures typical expenditures on infrastructure (including O & M and capital expenditures on physical infrastructure) by all levels of government. (Please refer to indicator 26 for the disaggregation of which level of government supplies different services). The indicator is a reflection of new land development undertakings as well as possible improved access to services by households.

In Harare the indicator was US\$ 69,50 per capita in 1994.

- 7.3.3 The *mortgage to credit ratio* is a measure of the relative size of the housing finance sector and its ability to provide households with the funds necessary to smooth their consumption patterns over time.

The table overleaf shows the percent of total assets held as mortgage advances and loans by building societies for the period 1985 to 1993.

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Plan Inc. Zimbabwe "Cone Textiles Housing Cooperative - Land Delivery Programme" for ITDG/Cone Textiles Housing Coop, 1992.

**Mortgage to Credit Ratio in  
Building Societies, 1985-1993**

YEAR	% PORTFOLIO TO MORTGAGES
1985	73,92
1986	71,61
1987	72,74
1988	69,03
1989	68,29
1990	67,50
1991	75,14
1992	77,32
1993	59,74

Source: CSO Quarterly Digest of Statistics June 1995

There was a relatively high ratio throughout 1985-1992 but then a substantial drop in the ratio in 1993. This was primarily due to the poor mortgage-to-deposit difference (see indicator HF1) from 1993 through to the present time. The mortgage to credit ratio should be read in conjunction with the credit-to-value ratio (see indicator HF2) which measures the ratio to mortgage holdings to total property value in housing - pointing to the overall importance of housing finance in the delivery process.

7.3.4 **Housing production** is a direct measure of the ability of the housing supply system to increase and replenish the urban housing stock. It measures new units completed (formal and informal), including subdivisions of existing units or building of outbuildings for new dwelling units less demolitions (including of informal stock) and conversions to other usages.

The indicator value starkly shows the inability of the housing delivery system to keep pace of the rapidly growing urban populations. The low volume of formal housing production is a result of a number of factors including the inflexible regulatory environment which results in inordinate permit and title approved delays (please see indicator RA1) and lack of housing finance (indicators HF2 and H8) which has resulted in high house price- and house rent-to-income ratios.

The low volume of formal housing production is further exacerbated by the demolition of existing informal housing stock by local authorities, in particular outbuildings and unauthorized extensions to existing buildings in Bulawayo and

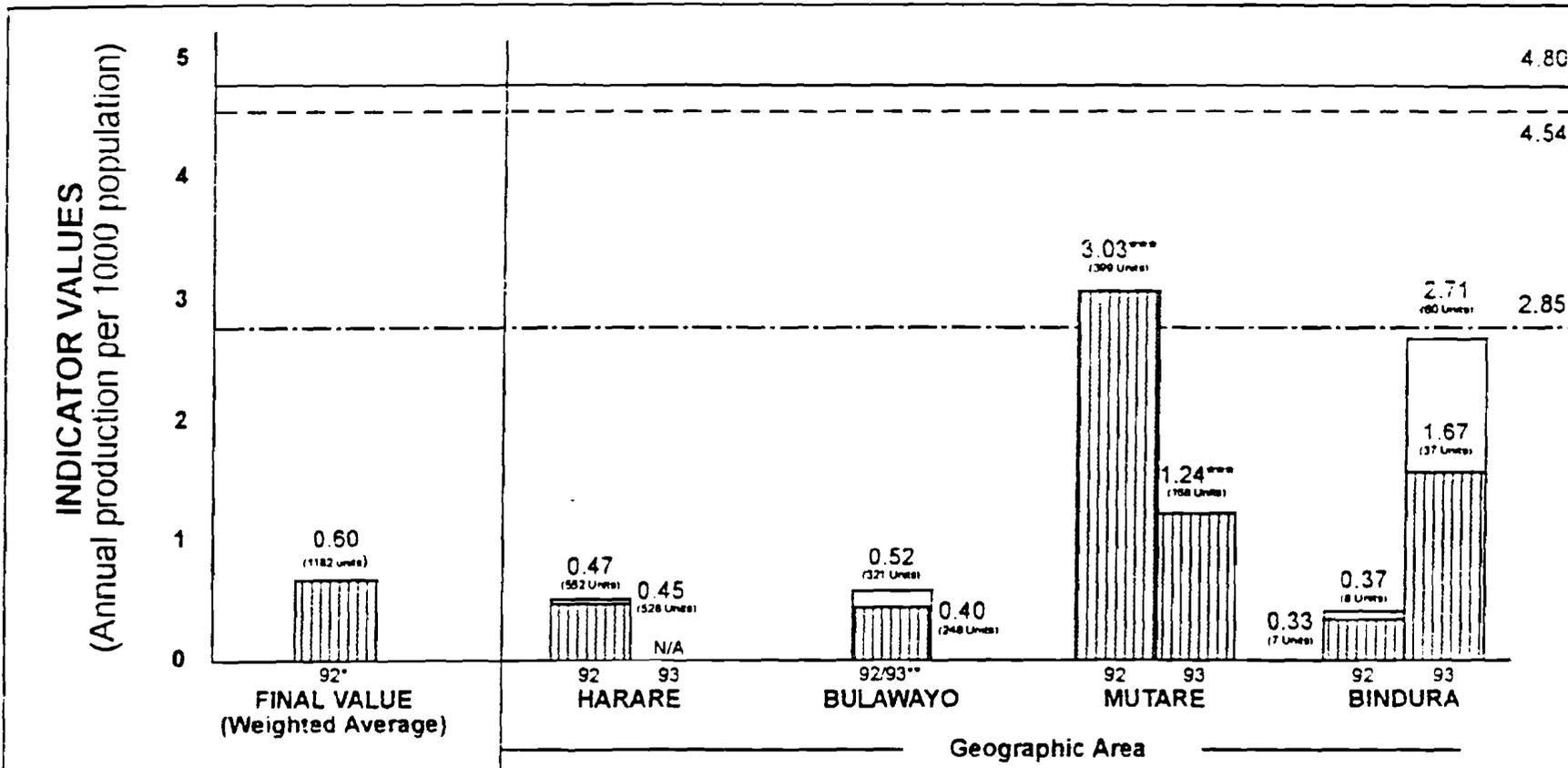
other secondary towns and of informal settlements in the greater Harare area (for example 4 500 units demolished on Churu Farm in 1994).

- 7.3.5 The *serviced stands* indicator is a similar measure as the housing production indicator and is similarly low.

All local authorities are now involved primarily in the servicing and survey of land for new development rather than the actual construction of superstructures yet access to serviced land is now recognised as one of the major constraints to housing delivery in the country. Recently there have been efforts by the private sector (notably housing cooperatives and the building societies) to service raw land. However the higher costs incurred by private developers compared to local authorities (due to subsidies - see indicator H6) and lengthy permit and title approval delays all act to restrict substantial private sector involvement in the servicing of land.

- 7.3.6 The total *investment in housing* as a percentage of city GDP measures the proportion of aggregate economic activity devoted to housing investment. It is an indirect measure of housing investment as it incorporates both quantities produced and prices.

The low values for this indicator further reinforces the indication of low levels of housing production.



**FORMAL LOW-INCOME HOUSING PRODUCTION**  
(per 1000 population)

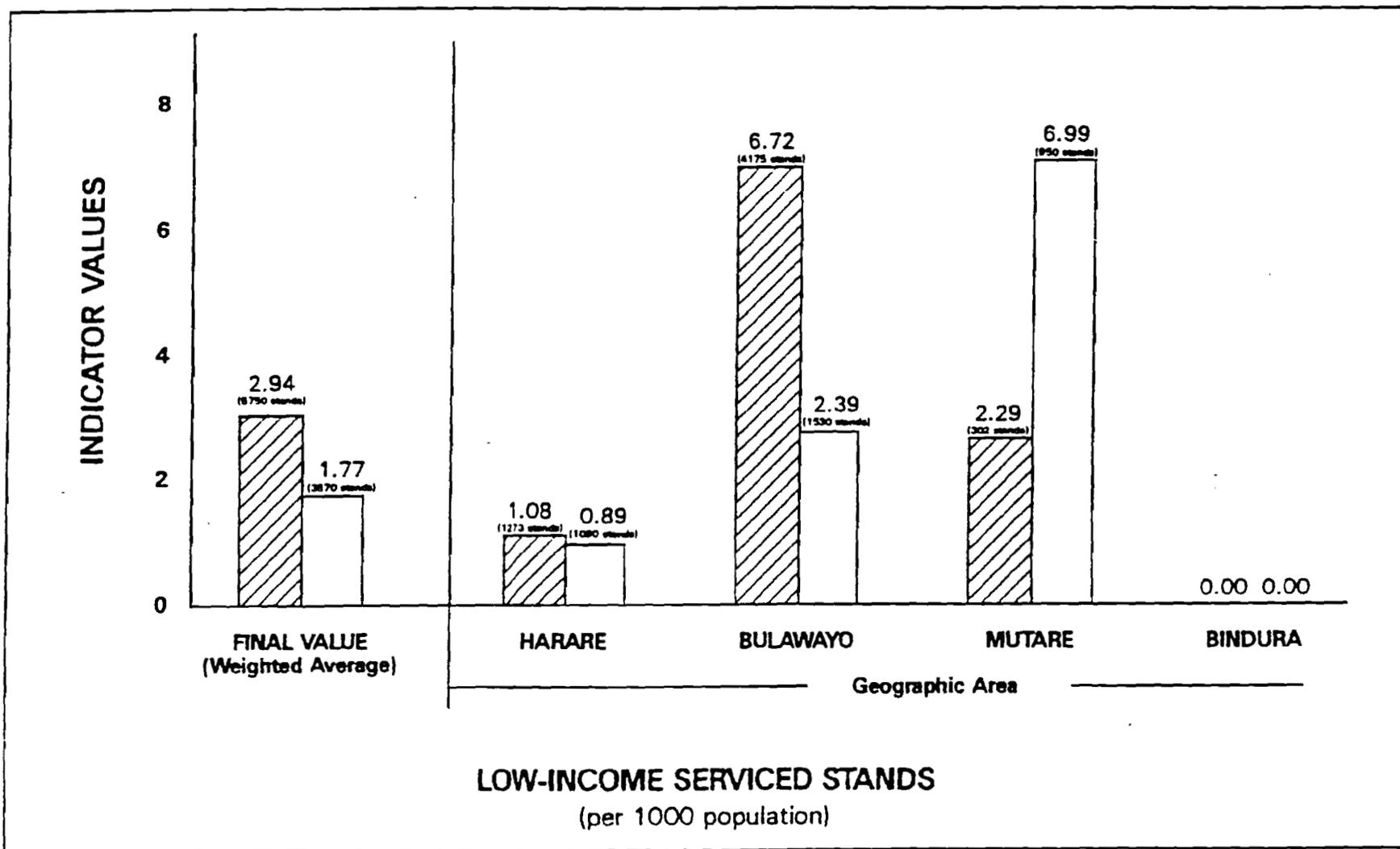
\* Includes 92/93 for Bulawayo.  
 \*\* Housing production for calendar years 1992 and 1993 not available.  
 \*\*\* Total housing production not available.

————— WORLDWIDE AVG.  
 - - - - - INCOME GROUP AVG.  
 - - - - - SUB-SAHARAN AVG.

Source: IEPD/UNCHS 1993 (1991/92 data)

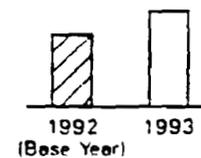
**KEY**

□ Total housing production (all areas)  
 ▨ Housing production in high density areas only



**LOW-INCOME SERVICED STANDS**  
(per 1000 population)

KEY



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## MODULE 8 : HOUSING FINANCE

### 8.1

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
<p><b>HF1. Mortgage to deposit difference:</b> <i>Difference between mortgage rate and one year deposit rate.</i></p>	<p><u>National:</u> 1991/92: 9,98% 1992/93: 18,17%</p>
<p><b>HF2. Credit to Value ratio:</b> <i>Ratio of mortgage loans to total housing investment (in both the formal and informal sector).</i></p>	<p><u>Harare:</u> 1992/93: 32,5% <u>Bulawayo:</u> 1992/93: 130,0%</p>

SOURCE:

1. PADCO Inc. and Plan Inc. "Zimbabwe Private Sector Housing Program Monitoring and Evaluation System", for USAID/Harare and MPCNH

### 8.2 Rationale Behind Module

Housing finance provision directly affects housing demand. The housing finance module looks at the ability of Zimbabwe's housing finance institutions to provide mortgage lending instruments in demand by households. In a well functioning housing market, the value of the mortgage to deposit difference should be slightly higher than the deposit interest rate. A high value for this indicator suggests a shortage of finance for housing, regulatory barriers or inefficient banking practices in mortgage lending.

On the other hand, the credit to value ratio which measures the degree of access of housing consumers to long-term mortgage finance, by accessing the proportion of housing investment made through the use of credit, if it is very small, a large proportion of housing investment requires savings and cash outlays and necessarily depressing housing demand.

### 8.3 Analysis of Indicator Values<sup>20</sup>

8.3.1 For the housing finance sector to be sustainable, lending institutions must be able to earn a reasonable return on their investments in mortgages. A key sign of sustainability is the *mortgage-to-deposit difference* indicator. This indicator measures the difference between interest rates on mortgages and the interest rate on

<sup>20</sup>

This analysis is derived from Padco Inc. and Plan Inc. "Zimbabwe Private Sector Housing Program Monitoring and Evaluation System" for USAID/Harare and MPCNH, 1994

one-year deposits in the commercial banking system. When choosing between investment options, in addition to considering the expected returns, a lending institution must weigh the risk and uncertainty associated with each alternative. Because mortgage loans in Zimbabwe normally extend for 15-20 years, they involve more risk than shorter-term investments. They should thus offer a slightly higher return than the one-year alternative. Typically, in a well-functioning housing market, the value of the mortgage-to-deposit difference indicator should be positive and only slightly higher than deposit rates.

Baseline survey results suggest that the Zimbabwe housing finance sector is distorted and unsustainable, and is becoming increasingly so. From a value of -9.98 in FY 1991/92, the indicator plummeted to -18.17 in FY 1992/93. With such negative indicator values, unless one offers special incentives (e.g. government subsidies), lending institutions would have little reason to want to invest in housing mortgages of any type. Results suggest that the mortgage finance market is more distorted in Zimbabwe than in other countries in Zimbabwe's income group (where the median value is +7), and in sub-Saharan Africa (median value: +3).

To keep low-income mortgages affordable, the GOZ has implemented several key policies related to housing finance. First, since 1986, the GOZ has regulated interest rate ceilings on low-income mortgages. These ceilings generally result in mortgage interest rates that are lower than the rates that would otherwise prevail under free market conditions. Second, the GOZ limits the number and types of financial institutions that can offer mortgages. Only building societies are currently authorized to issue mortgages.

A third key policy of the GOZ is the decision to offer a variety of subsidies as a way to encourage building societies to issue low-income mortgages. Building societies report that the costs of servicing low-income mortgages are considerably higher than for other mortgages. For this reason (and particularly under capped interest rate conditions), without subsidies, few, if any, low-income mortgages would be offered. A key subsidy offered by the GOZ is to allow building societies to issue tax-free, paid-up permanent shares (PUPS). A condition to the issuance of these tax-free PUPS by building societies is that 25% of the issue be devoted to low income lending.

One benefit of current policies is that some (albeit too few) low-income mortgages are indeed offered at affordable prices. Before 1986, virtually no low-income mortgages were offered. In FY 1986/87, building societies began to offer low-income mortgages, with 3147 such mortgages offered in that fiscal year. The number of low-income mortgages offered subsequently climbed to a plateau of about 5,500 per year between 1988/89 and 1990/91. While these volumes are insufficient to fund more than a fraction of the 66,000 new units per year that the MPCNH has estimated are necessary to eliminate Zimbabwe's housing shortage by the year 2000, some low-income families certainly do benefit from current policies.

One disadvantage of current policies, however, is that at the capped interest rate

levels, the demand for low-income mortgages may and does exceed supply.

Another disadvantage of Zimbabwe's subsidized system of low-income shelter finance is that mortgage investment in low-income housing may vary substantially from year to year. When the PUPS deposit rate exceeds the effective money market rate, building societies will issue more PUPS and offer more low-income mortgages. Otherwise building society resources will flow away from PUPS and low-income mortgages, and into money market deposits. As money market rates vary over time, investment in low-income housing may rise and fall markedly. Thus, the current system is susceptible to external shocks. This disadvantage - sharp fluctuations in the number of low-income mortgages offered has been the result. In FY 1991/92, the number of low-income mortgages sharply declined to 1,220 in 1991/92, about one-fifth the previous year's level. This abrupt decrease was due to money market deposits becoming more attractive investments than PUPS during 1991/92.

One other major factor arguably depresses the volumes of low-income mortgages provided: the segmentation of the financial sector. Home financing is left almost exclusively to building societies. Those societies cannot be expected by themselves to provide all necessary financing for housing, especially for low-income families.

A final drawback of the current policies should be noted: the cost to the GOZ of subsidizing housing finance. In base year 1992, one economist calculated the total value of all housing subsidies as exceeding Z\$ 183 million per year<sup>21</sup>.

To summarize: while Zimbabwe's segmented housing finance system, with its subsidies and interest rate ceilings, does provide affordable loans to a lucky few recipients, it costs the GOZ in lost revenue and may also stifle investment in shelter.

8.3.2 The *credit-to-value ratio* is the ratio of mortgage loans for housing to total investment in housing. The base year indicator value was 32.5 for Harare and 130.0 for Bulawayo. This indicator represents the ratio of mortgage loans to total investment in housing (expressed as a percentage). World Bank economists argue that a higher value is a good, signalling a greater "... degree of access of housing consumers to long-term mortgage finance". Conversely, a lower value suggests that a larger "... proportion of housing investment requires savings and cash outlays, ... depressing housing demand". An increase in this indicator appears less ambiguously positive, however, if one considers that repressing informal sector activity will also lead to higher values for this indicator. Such measures are not universally considered appropriate shelter policy.

The base year indicator value reported for Harare (32.5) is similar to averages reported by the World Bank/UNHCS for Zimbabwe's income group (38), and well above worldwide and regional averages of 17 and 13, respectively. When interpreted

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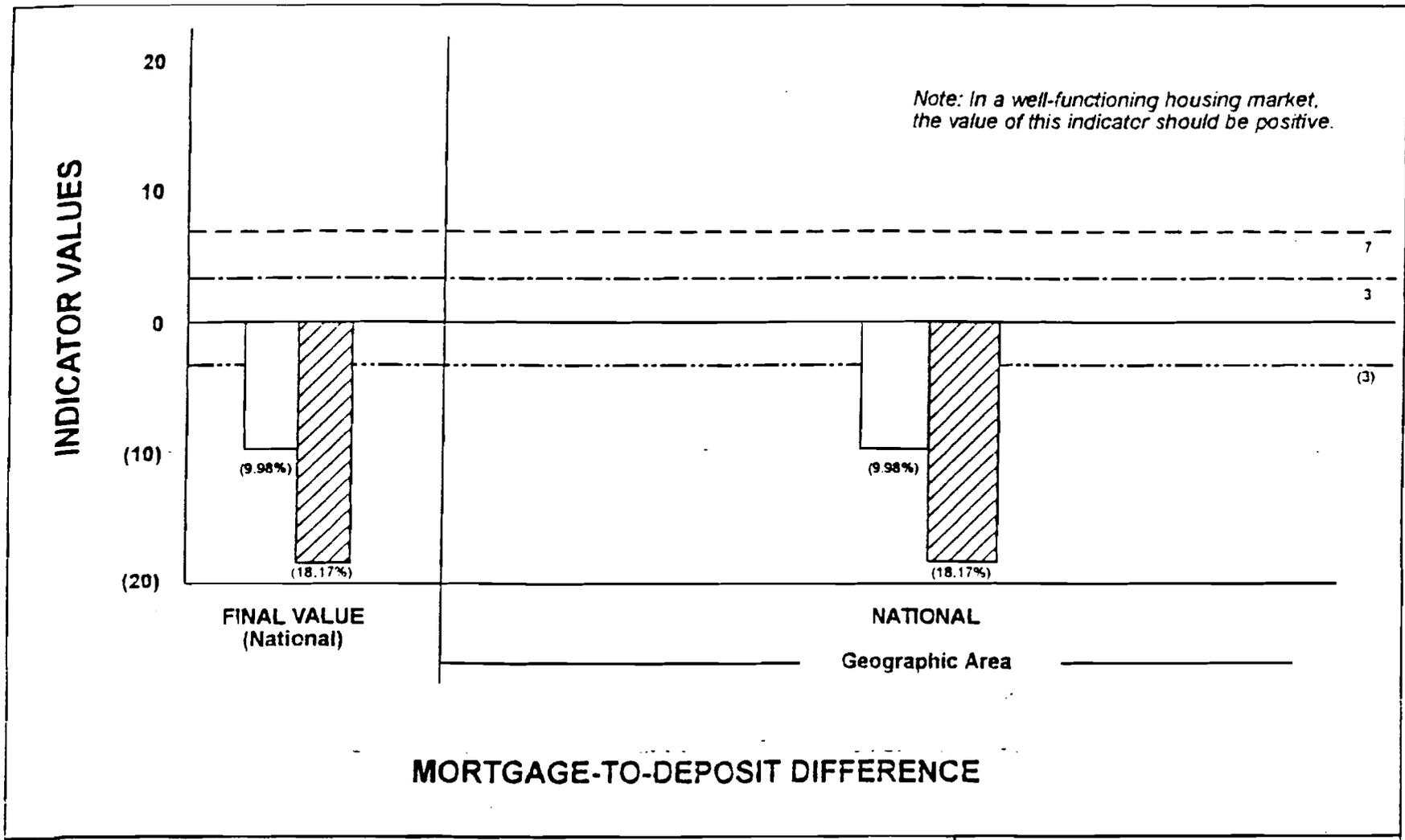
21

Bovet, Claude, "Zimbabwe Housing Finance Mobilization Study", for USAID/Zimbabwe, 199\_, p.12.

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in light of other indicators, this relatively high value can be seen as largely due to vigorous discouragement of investment in unauthorized housing, rather than to a well-developed mortgage loan market.

The credit-to-value ratio for Bulawayo was a surprisingly high 130 percent, showing that the value of mortgage loans issued exceeded total investment in housing. Several factors appear to have contributed to this anomaly. Many mortgage recipients apparently used the loans to buy existing houses rather than constructing new units. Some persons may have additionally used the funds to purchase housing outside the City of Bulawayo, or even (illegally) for non-shelter investments. Building in Bulawayo was reportedly stagnant during the base year because of famine conditions.



BASELINE (=0)

### MORTGAGE-TO-DEPOSIT DIFFERENCE

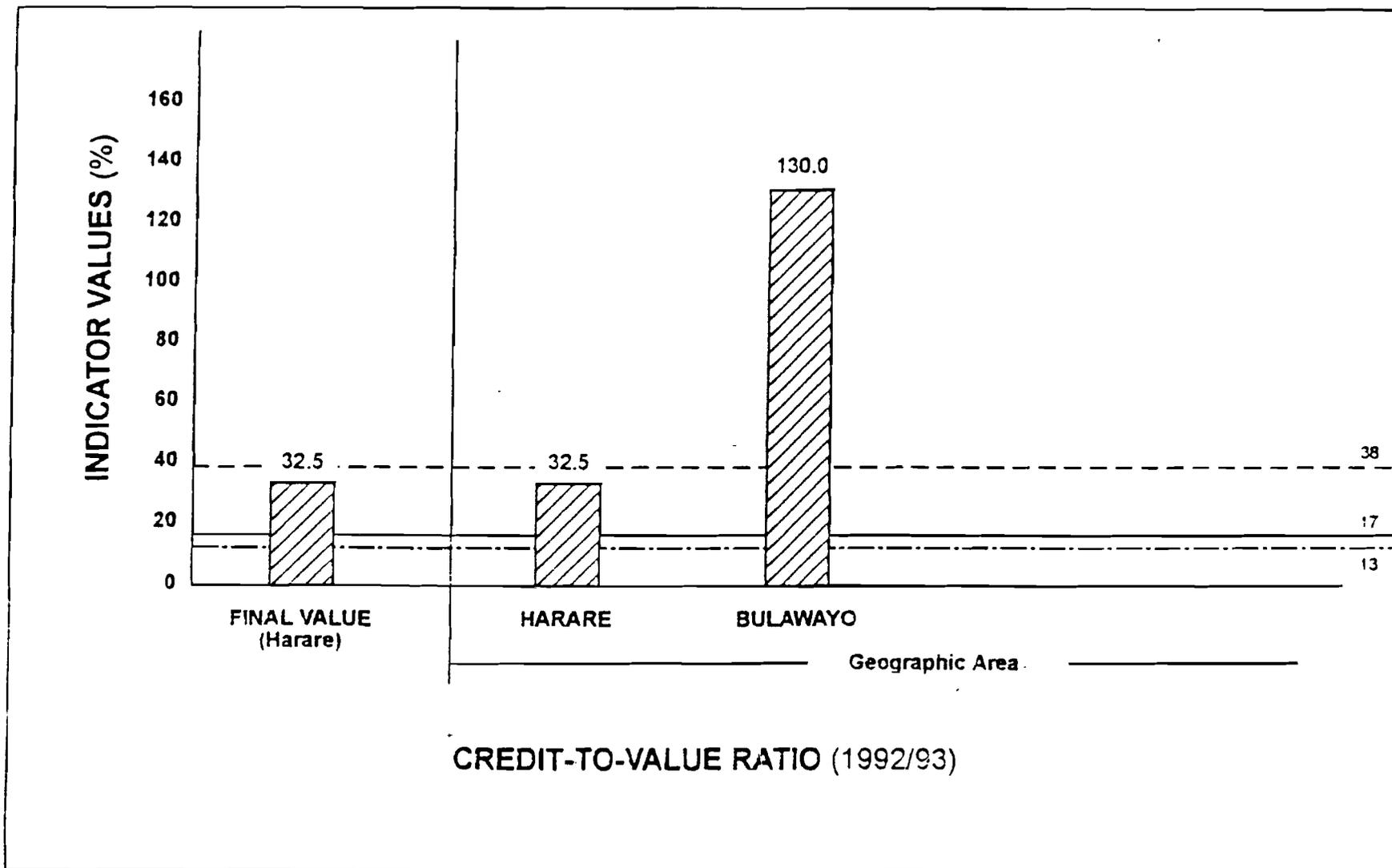
**KEY**

- Income Group Median
- Sub-Saharan Median
- Europe, Middle East, and North Africa Median

91/92      92/93 (Base Year)

Source: BRD/UNCHS 1993/1991/92/1991

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**KEY**

- INCOME GROUP AVG.
- WORLDWIDE AVG.
- - - - - SUB-SAHARAN AVG.

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## MODULE 9 : REGULATORY AUDIT

### 9.1

INDICATOR NAME AND DESCRIPTION	NATIONAL URBAN VALUE
<p><b>RA1. Permit approval times:</b> <i>The median length in months to obtain approvals, permits and titles for a medium sized (50-200 unit) residential subdivision in an area on the urban fringe where residential development is permitted.</i></p>	<p><u>Harare:</u> 1992            41,65</p> <p><u>Bulawayo:</u> 1992            35,75</p> <p><u>Mutare:</u> 1992            38,15</p> <p><u>Bindura:</u> 1992            45,65</p>
<p><b>RA2. Public land ownership:</b> <i>The estimated percentage of total land in the metropolitan area that is owned by public agencies.</i></p>	<p><u>1994:</u></p> <p>Kwekwe:        69%</p> <p>Bindura:        52%</p> <p>Masvingo:      30%</p> <p>Average:       50,3%</p>

**SOURCES:**

1. PADCO Inc. and Plan Inc. "Zimbabwe Private Sector Housing Program Monitoring and Evaluation System", for USAID/Harare and MPCNH, 1994
2. Consultants' interviews with local authority officials

### 9.2 Rationale Behind Module

An efficient land delivery system for housing (and all other urban land uses) is a prerequisite for meeting housing demand in urban areas. The regulatory audit module looks at how efficient Zimbabwe's land delivery system is as well as capturing the possibly monopolistic practices in residential land development. The land delivery system has a direct effect on cost of producing houses, collateral, etc.

### 9.3 Analysis of Indicator Values

9.3.1 *Delays in the permitting and titling process* in urban centres in Zimbabwe are severe enough to constrain the production of shelter, especially of affordable housing. In the four urban centres studied, the time required to approve, permit, and title a new, medium-sized residential subdivision in 1992 averaged about three years and four months. Permitting and titling time varied between three years (Bulawayo) and three years and ten months (Bindura). As the only town council among the four urban centres (the others are cities), the local authority of Bindura probably relies on less institutional capacity than the larger centres, contributing to slightly longer delays. Delays in Harare were about average, at three-and-one-half years.

Delays in the land development process in Zimbabwe are severe compared to worldwide averages. The average delay in Zimbabwe of three years and four months is *three times* the average of 13 months for countries reporting worldwide and are also significantly longer than averages in sub-Saharan Africa and for countries in Zimbabwe's income group.

The figure breaks down the delays in Zimbabwe into four major phases of development: subdivision layout, infrastructure design and construction, cadastral surveying, and building plan preparation. This breakdown shows that, typically, nearly half of total delays (19 of 40 months) occur during one of those four phases: cadastral surveying. The Department of the Surveyor General, in its *Annual Report* for 1992, reported "severe budget constraints", at a time of "marked increase[s] in land dealings and transaction[s]". Those conditions resulted in a "shortage of staff ..[and] extreme hardships due to shortage of vehicles and equipment," etc. As a result, in 1992 "the backlog in approved surveys increased. In 1995 the delay has increased to a delay of "indefinite" rather than a delay in months.

It should be noted that delays in cadastral surveying captured by the base year survey, were actually *reduced* by an outside intervention. In mid-1993, the GOZ authorized USAID to finance the short-term hire of a team of professional surveyors who, in several months greatly reduced the backlog of projects waiting to be surveyed. Delays are typically longer for those projects that did not benefit from that one-time intervention.

Also notable are the delays in town planning layout preparation and approvals. In some cases the same layout requires approval by three different planning authorities.

Such severe delays in the permitting and titling process exert several related, negative impacts on the shelter market. Delays distort investment decisions; investors inefficiently divert resources to other sectors that offer quicker returns on investment. Delays may also discourage new builders and developers from entering the market. Those few developers who do survive in the sector have legitimate grounds for charging higher prices, to make up for delayed returns, increased risk, and projected inflation. The barrier to entry may also afford developers with some protection from new competition, giving them the opportunity to exact more profits than would be obtained under competitive market conditions (i.e., to earn oligopolistic profits).

Together, those impacts result in lower formal sector production and higher prices.

Finally, faced with a cumbersome development procedure, urban residents and private property speculators in fringe areas decide to bypass the process altogether and build unauthorized (informal) housing. That housing often causes negative health and

environmental side effects.

9.3.2 The *public land ownership* ratio is a specific measure of monopolistic practices in residential land development, focusing on public land monopolies.

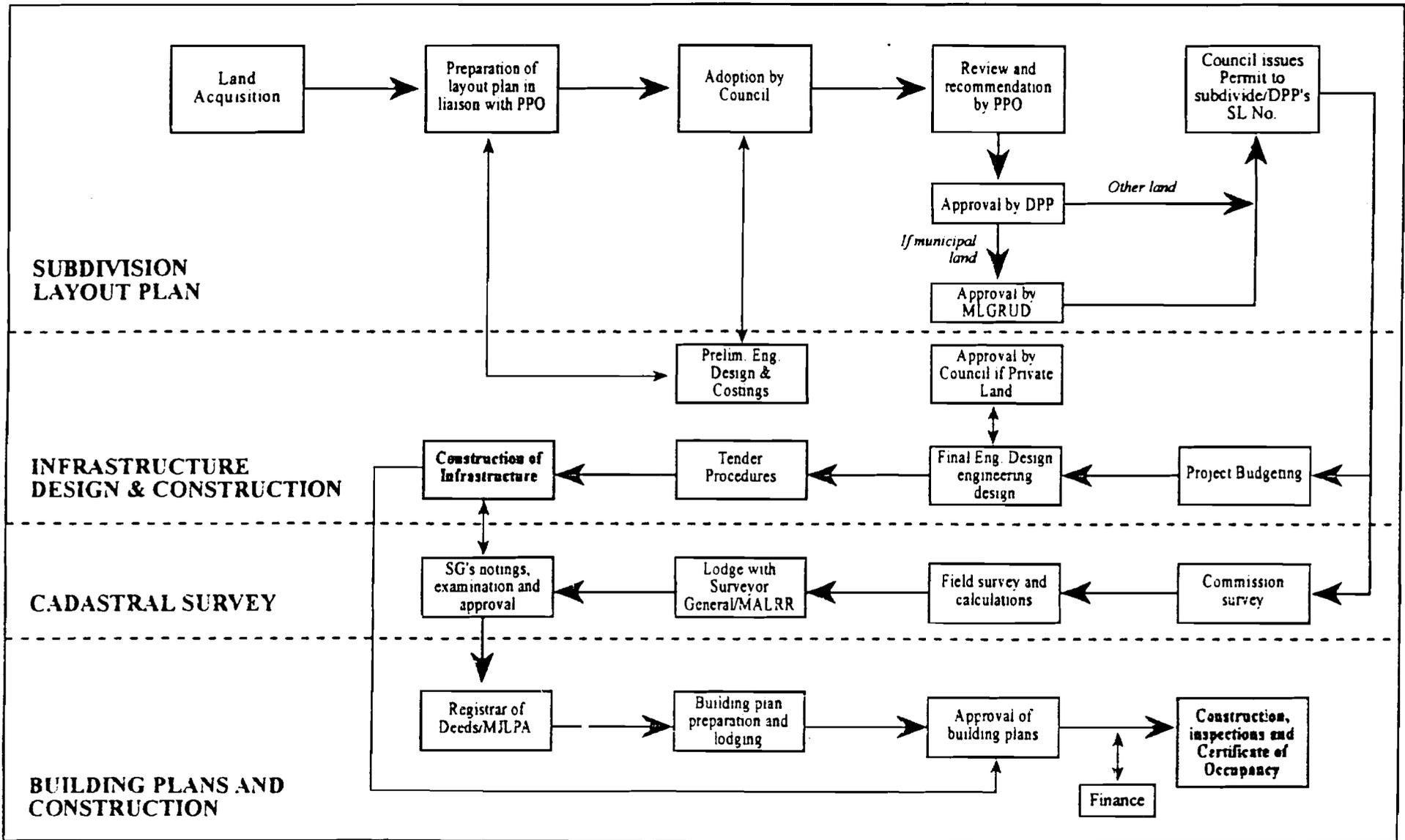
Public land ownership in Zimbabwe is high in comparison to other low income countries (30%) and other countries in sub-Saharan Africa (18%).

The high value of public land ownership as found in secondary centres (and especially constrained by lengthy permit approval times) can and has lead to artificial shortages of urbanized land to higher land prices and in turn to higher house prices.

In the case of some large tracts of land held by government ministries not associated with land development (for example prison farm, aerodromes, and similar) the land is frozen against conversion to alternative urban uses.

These constraints are not as yet recognised by local authorities which are unanimous in their desire for land banking.

# Permitting and Titling Approval Process\*



**NOTES**

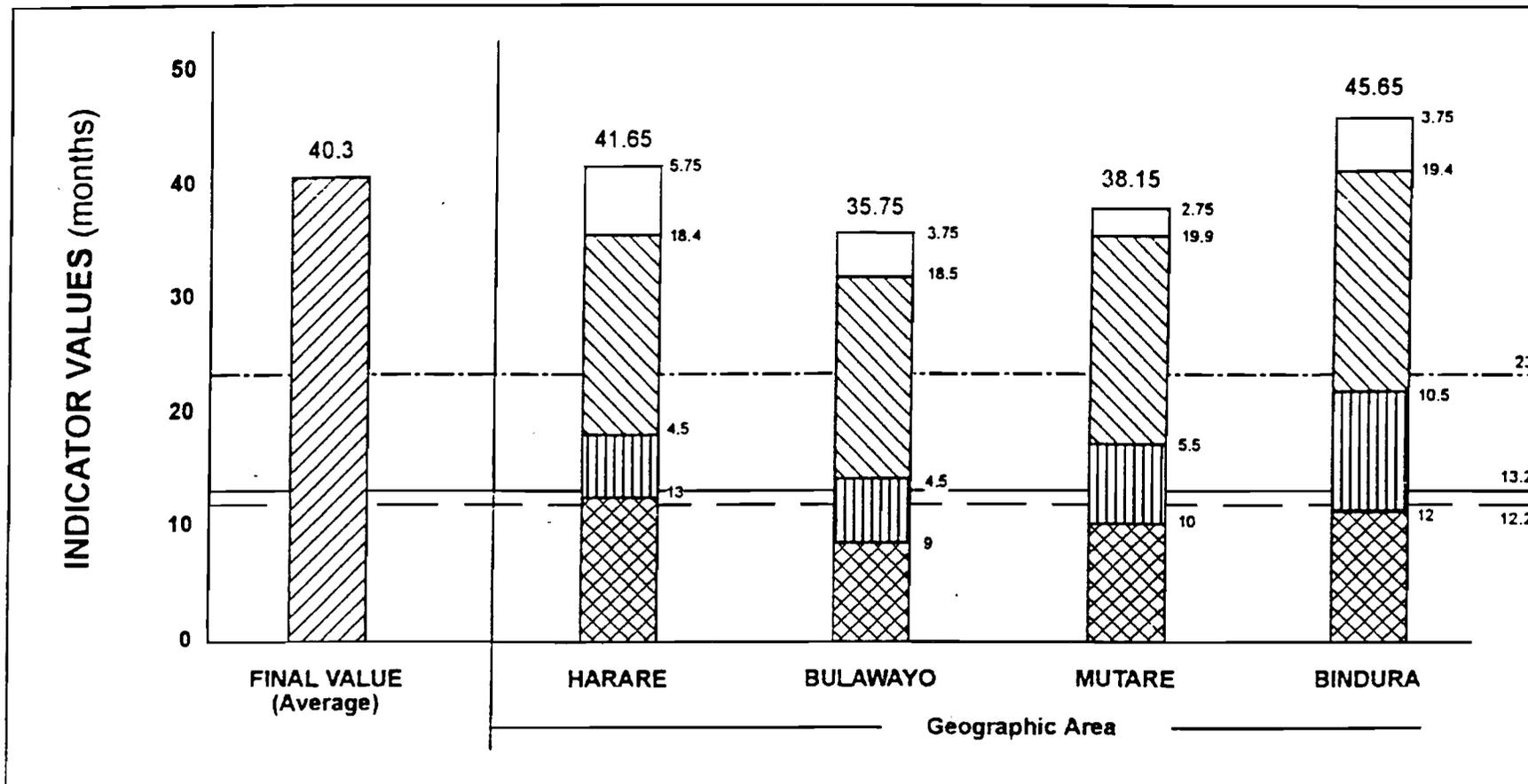
DPP = Director of Physical Planning, MLGRUD  
 PPO = Provincial Planning Officer, DPP/MLGRUD  
 MALRR - Ministry of Agric., Lands & Rural Resettlement

MJLPA = Ministry of Justice, Legal & Parliamentary Affairs  
 MLGRUD = Ministry of Local Govt. Rural & Urban Development  
 SG = Surveyor General



Indicates desired end-points of development process

\* For private or public sector residential developers within a municipal area. (Assumes land is already in ownership of the developer and is appropriately zoned)



PERMITS AND TITLE DELAYS (1992)

-----	SUB-SAHARAN AVG.	<b>KEY</b>		BUILDING PLANS
—————	WORLDWIDE AVG.			CADASTRAL SURVEY
- - - - -	INCOME GROUP AVG.			INFRASTRUCTURE DESIGN AND CONSTRUCTION
	Source: USAID, 1994			SUBDIVISION LAYOUT

**ANNEX A**  
**LIST OF PEOPLE CONSULTED**

### **Ministry of Public Construction and National Housing**

Mr E. Tafangombe	Under Secretary for Housing Development, Chairman ZCCHS
Mr I. Mberengwa	Assistant Secretary for Housing
Mr Gumi	
Ms S.N. Musungwa	
Mr B. Makuwe	Senior Housing Development Officer

### **Central Statistics Office**

Mr Magura	
Mr Mapeta	Assistant Director
Ms G. Mufakose	

### **USAID**

Dr T. Chiramba	Housing Program Office
----------------	------------------------

### **MLGRUD/PCMU**

Mr O. Musandu-Nyamayaro	Coordinator
Mr Mahere	Financial Analyst
Mr B. Kittelsohn	Financial Analyst

### **City of Harare**

Mr Guta	City Treasurer
Mr Mahachi	Director of Works
Mr Zata	City Amenities Manager
Mr Sithole	Chief Engineer, Water & Sewerage
Mr Mtimukulu	Chief Engineer, Highways
Mr S. Matawu	Principal Engineer, Water & Sewerage

### **City of Bulawayo**

Mr M. Ndlovu	Deputy Town Clerk
Mr I. Magagula	Director of Housing & Community Services

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Mr J. Ndebele	Chief City Planner
Mr Nyoni	City Treasurer
Mr N. Ncube	Deputy Director of Housing & Community Services
Mr J.S. Ncube	Senior Housing Officer
Dr Nyathi	Medical Director of Health
Mr G. Enstin	Assistant Director - Environmental Health
Mr M. Sibanda	Senior Hygiene Officer
Mr N. Sibanda	Hygiene Officer

### **Chitungwiza Town Council**

Mr Mudunge	Director of Housing & Community Services, President of the Forum of Directors of Housing & Community Services.
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### **Masvingo Town Council**

Mr Mhangami	Town Clerk
Mr Vandirai	Deputy Director of Housing and Community Services

### **City of Mutare**

Mr Ncube	Acting Town Clerk
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### **Gwanda Town Council**

Mr Mlilo	Town Clerk
Mr M. Mzilla	Senior Administrative Officer

### **Bindura Town Council**

Mr Mambara	Acting Town Clerk
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### **Gutu-Mupandawana Rural District Council**

Mr S.J. Munderi	
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### **Kwekwe Town Council**

Mr C. Maguranye	Senior Administrative Officer
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