



Poverty Alleviation Through Environmental Fiscal Reforms (EFR): A Case Study of Solid Waste Management Sector (SWS)

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Introduction ...

- **Environment Fiscal Reforms (EFR)?**
 - ✓ **PPP**
 - ✓ **Govt. revenue, expenditures, fees, taxes, subsidies, loans related to environment**
- **Pro Poor EFR? –Threefold Benefits**
 - ✓ **Environmental**
 - ✓ **Poverty Reduction**
 - ✓ **Fiscal**



EFR Benefits

Poverty Reduction

Improving **environmental** quality e.g better natural resource management or provision of environmental infrastructure:

–poor depend on environment for health, livelihoods and vulnerability

•**Fiscal** revenues: revenues for pro-poor expenditure on health, education etc

•**Protection or compensation** to protect poor from price rises

Environmental Benefits

Incentives for sustainable
NR management

Incentives for curbing
pollution (air, water, soil)

Funds for environment
agencies and investments

EFR

Fiscal Benefits

Revenue mobilization
Reduced distortions
Reduced drains on
public finances

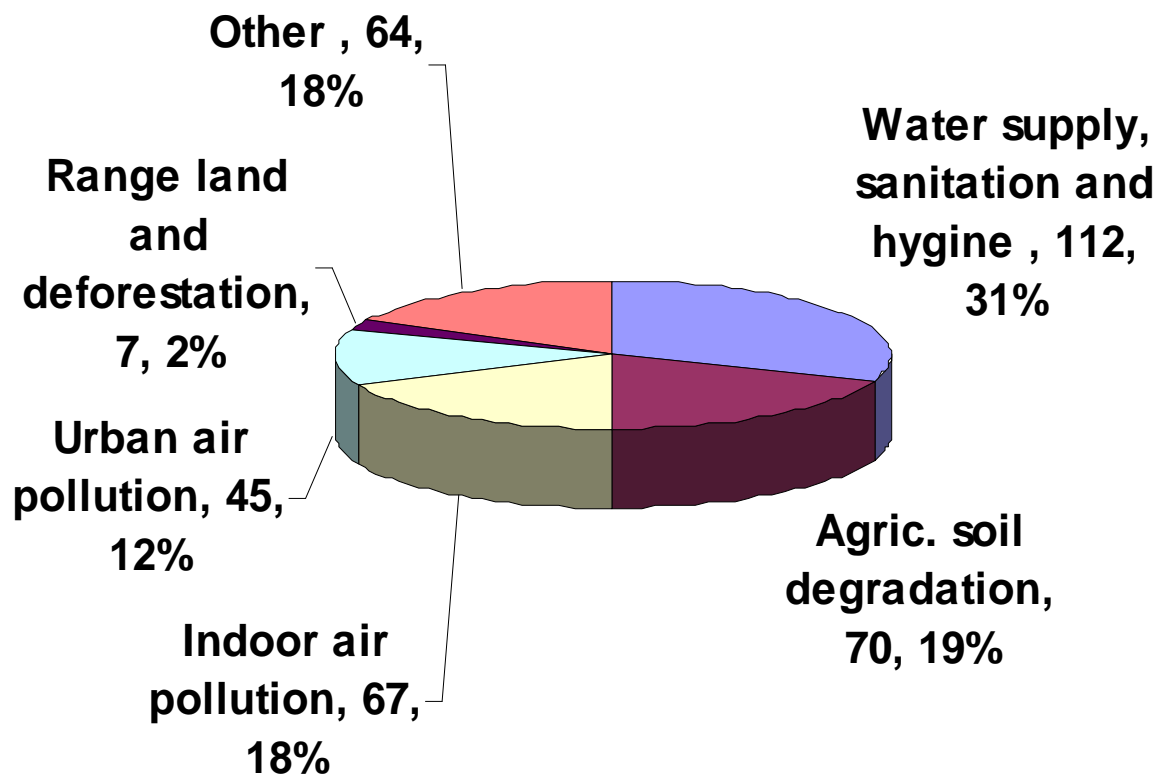


Introduction ...

- IUCN/PIDE - Abbottabad based study
- EFR options in SWM sector
- SW causes environmental degradation, depletes natural resources and causes health problems which finally results in more poverty
- Poor people are the most receptive and affected part of population
- Directly as well as indirectly affected by the environmental degradation



Annual Losses Due to Env. Degradation





Introduction ...

- **Populated urban centre**
 - ✓ Little plan surface - mountainous
 - ✓ Growing trend of immigrants
 - ✓ Junction – Base camp
- **Urban population 18%**
- **Rural population 82%**
- **TMA spend around Rs. 15 million on SWM**



Methodology

- Both formal and informal information gathering
- Stakeholders meeting, Key Informant Survey, General Observation
- HH survey at rural and urban Abbottabad
- 40:60, rural vs. urban
- 455 HH surveyed
- 2779 HH members

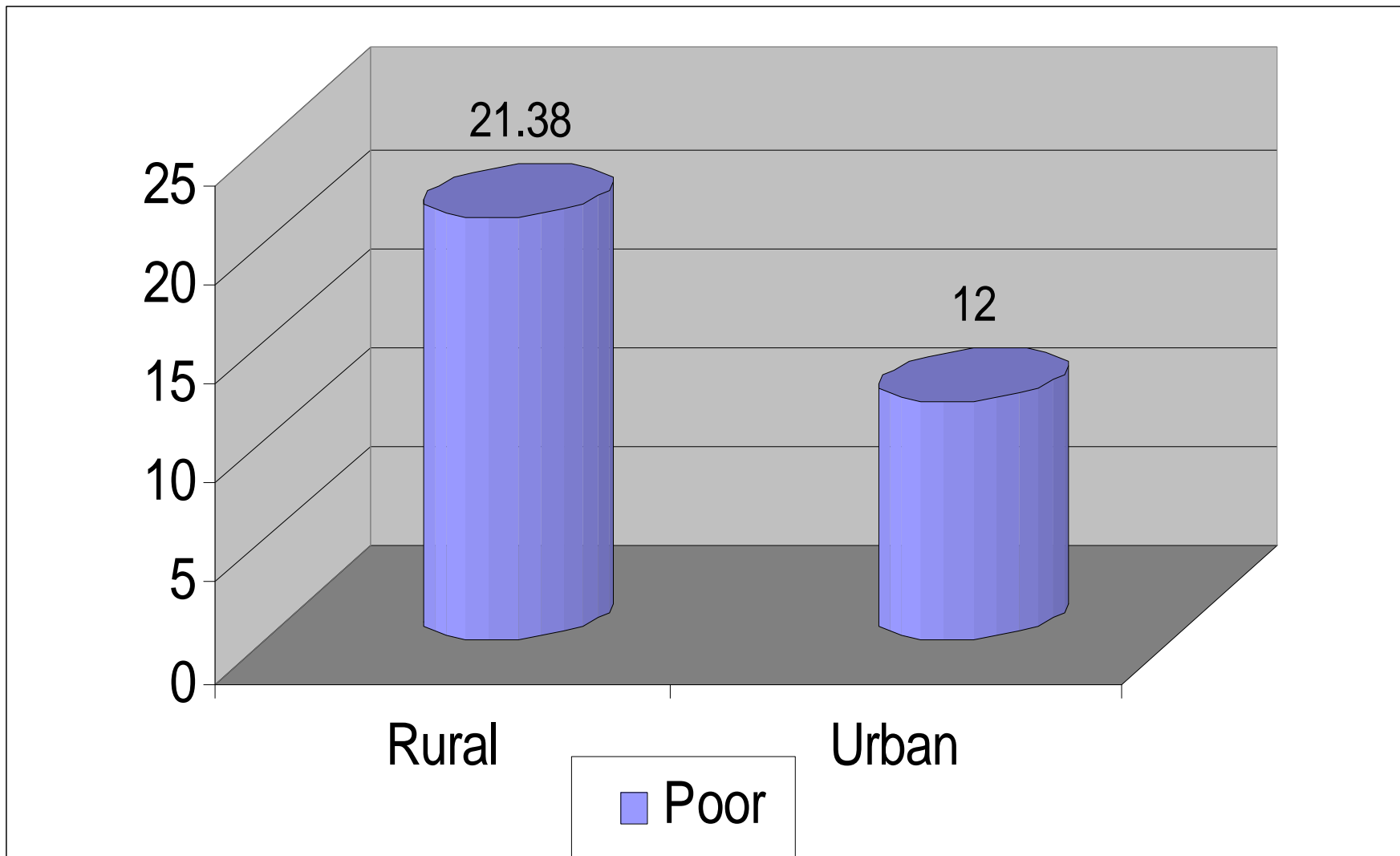


Poverty Estimates

- Environmental degradation and Poverty has close nexus
- Analysis on the basis of poor and non poor will help in identifying the behaviour, practices and problems
- Currently no poverty estimates at district level
- Adopted and updated the PSLM Survey poverty line 2005-06
- New figure is Rs. 1100/adult/month (Dec. 2007)
- Rural 21.4%, Urban 12% and Total 19.7 %

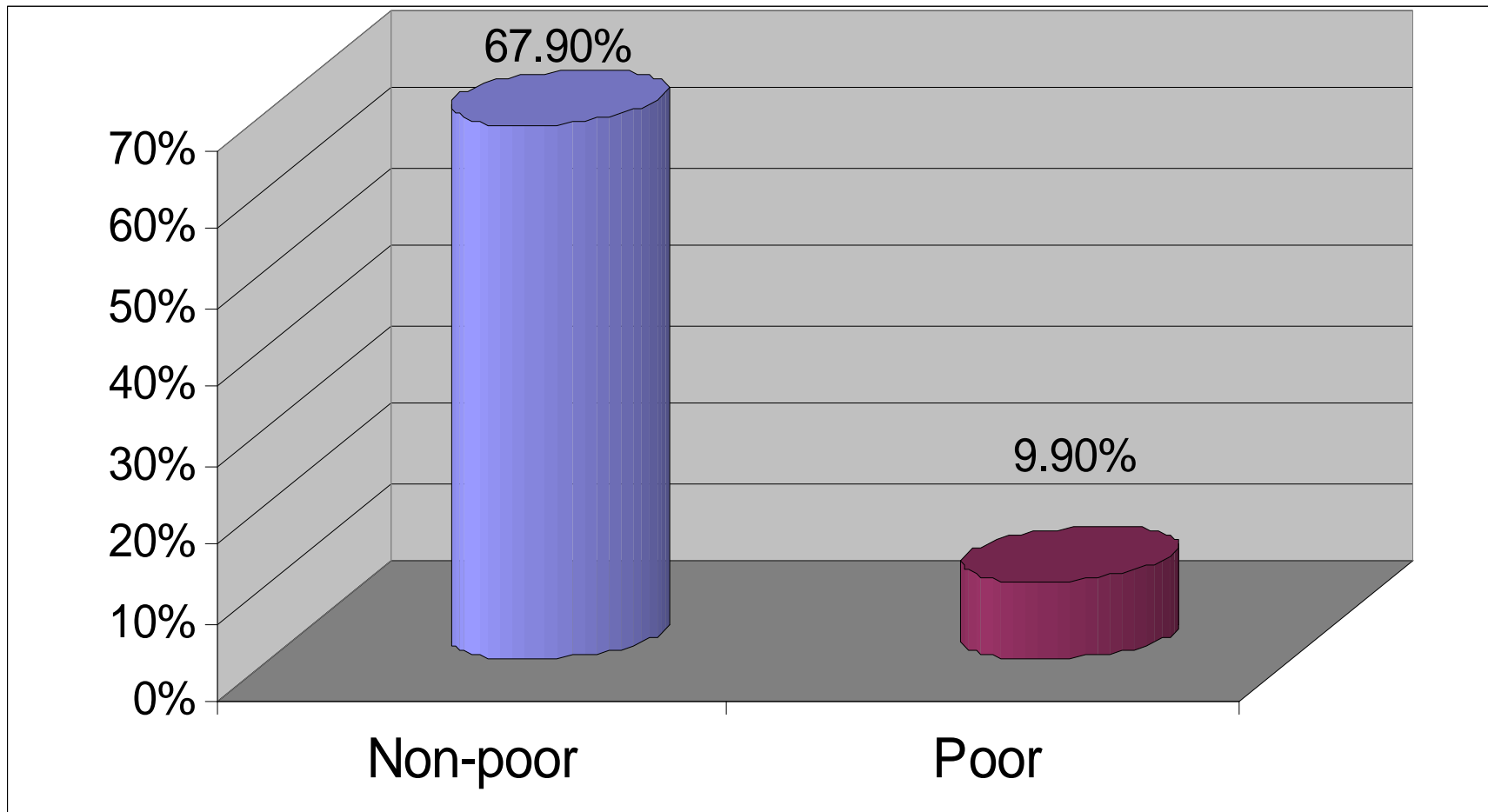


Poverty Estimates (%)



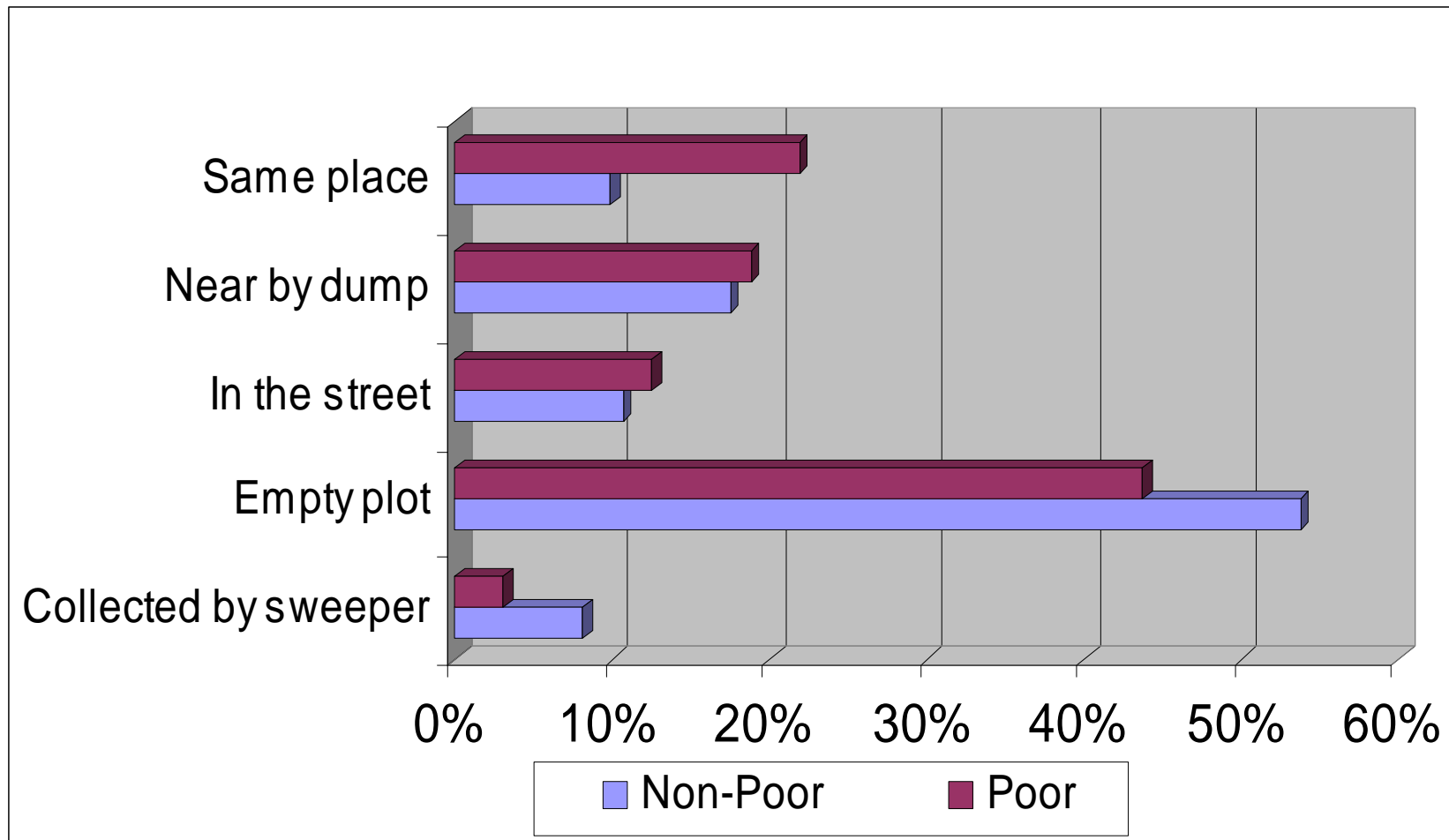


Awareness Status among the Poor and Non-Poor HHs



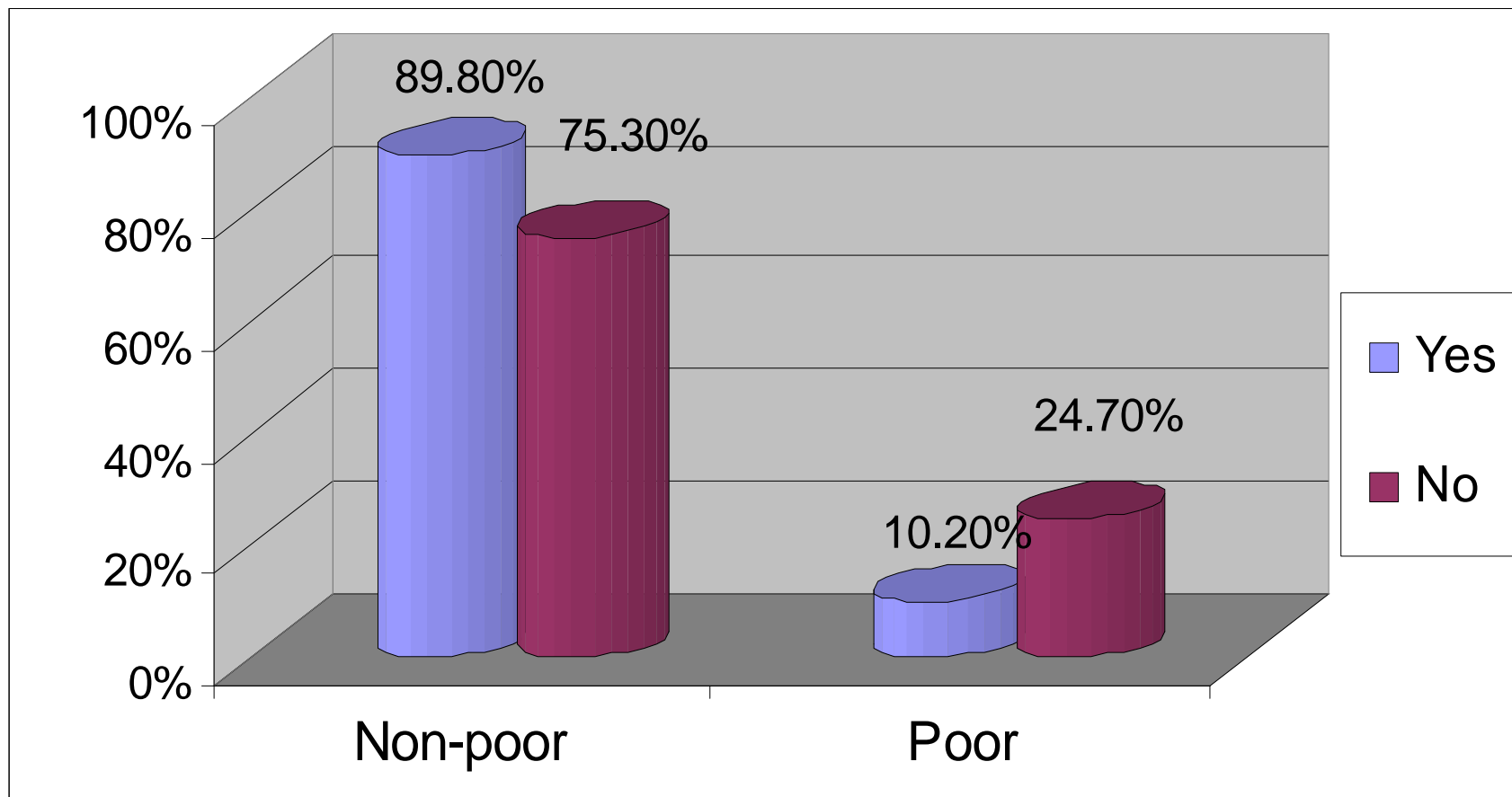


Pattern of Waste Disposal



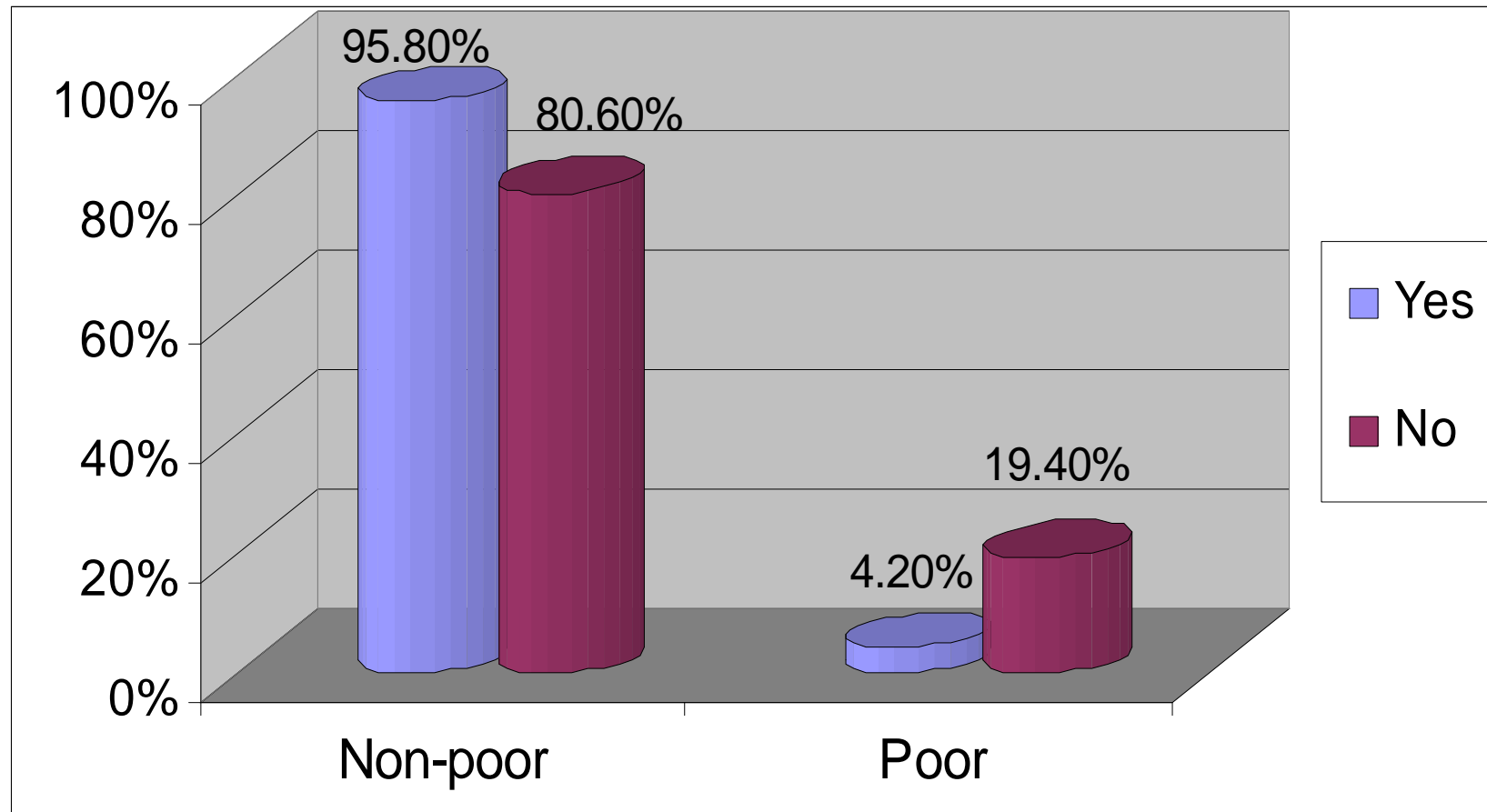


HHs WTP for Rs. 50 for Better SWM





HHs WTP for Rs. 100 for Better SWM





Prevailing Situation







Community Waste Dump





Scavengers Livelihood







ہیپٹائٹس بی اور سی

کا مکمل علاج صرف ایک ماہ میں

ڈاکٹر محمد اقبال خواجہ

ایم۔ بی۔ بی۔ ایس، آر۔ ایم۔ پی

ہم آپ کی بیماری ختم
کر۔ نہ کا دمہ لیتے ہیں

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کونین اینکومپی ڈیابٹس سینٹر



Waste Generations Estimates of District Abbottabad

	Rural	Urban	Abbottabad
Current projected population	866263	188868	1055132
Average HH size*	6.52	5.91	6.13
Per capita waste generation* (kg/day)	0.32	0.37	0.35
Average waste/HH/day* (kg)	2.07	2.17	2.14
Total waste generation *(tons/day)	298.41	69.63	368.05
Waste generation per month* (tons/day)	8952.57	2088.92	11041.50
Waste generation per year*(tons/day)	107431	25067	132498

*Sample estimates



Potential EFR options in SWM

- Tax system can only work if public is ready to accept
- However, service provider too, looks at the viability of the service provision
- Have to address both the concerns
- Basic pre-requisites for the EFR to work
 - ✓ Quality of the services
 - ✓ Affordability to the public
 - ✓ Proper awareness and motivation
 - ✓ Indigenous technologies
 - ✓ Cost effectiveness



Potential EFR Options in SWM

- Availability of best services for better SWM and public WTP are interwoven
- Service quality will convince the public to contribute to development process
- Introduction of private sector
- Loans/subsidies to Set up compost plants -

All the above option will create jobs, lessen the environmental hazards, dent poverty and result in the production of agri. inputs (organic fertilizer)



Potential EFR options in SWM (Scavengers)

- Scavengers play an important role in reducing waste
- Feed the recyclables industry
- However, Scavengers live at the subsistence level
- Streamline them by extending loans and licenses, so that they can start, expand and organize their businesses
- Would enhance collection efficiency and reduce the burden on TMA improve environment and at the same time would reducing poverty
- Streamlining will also reduce child labour



Potential EFR options in SWM

- It is a common phenomenon that TMA workers are inefficient and lack commitment
- Remedy is a policy of **“BUY WASTE”**
- Sweepers are given monetary incentives that they will be paid for that volume of waste which they collect and bring to the designated community dumps or the disposal sites
- Better and efficient collection of waste
- Higher waste collection efficiency by TMA workers would be achieved



Potential EFR options in SWM

- Allocate funds to install sign boards at various locations, bearing the public education messages related to environment
- Public and private educational institutions should play a role
- Tax the polythene bag manufacturers and subsidize the other environmental friendly industries
- Charge a token fee Rs. 35/HH after achieving the desired level of service quality.

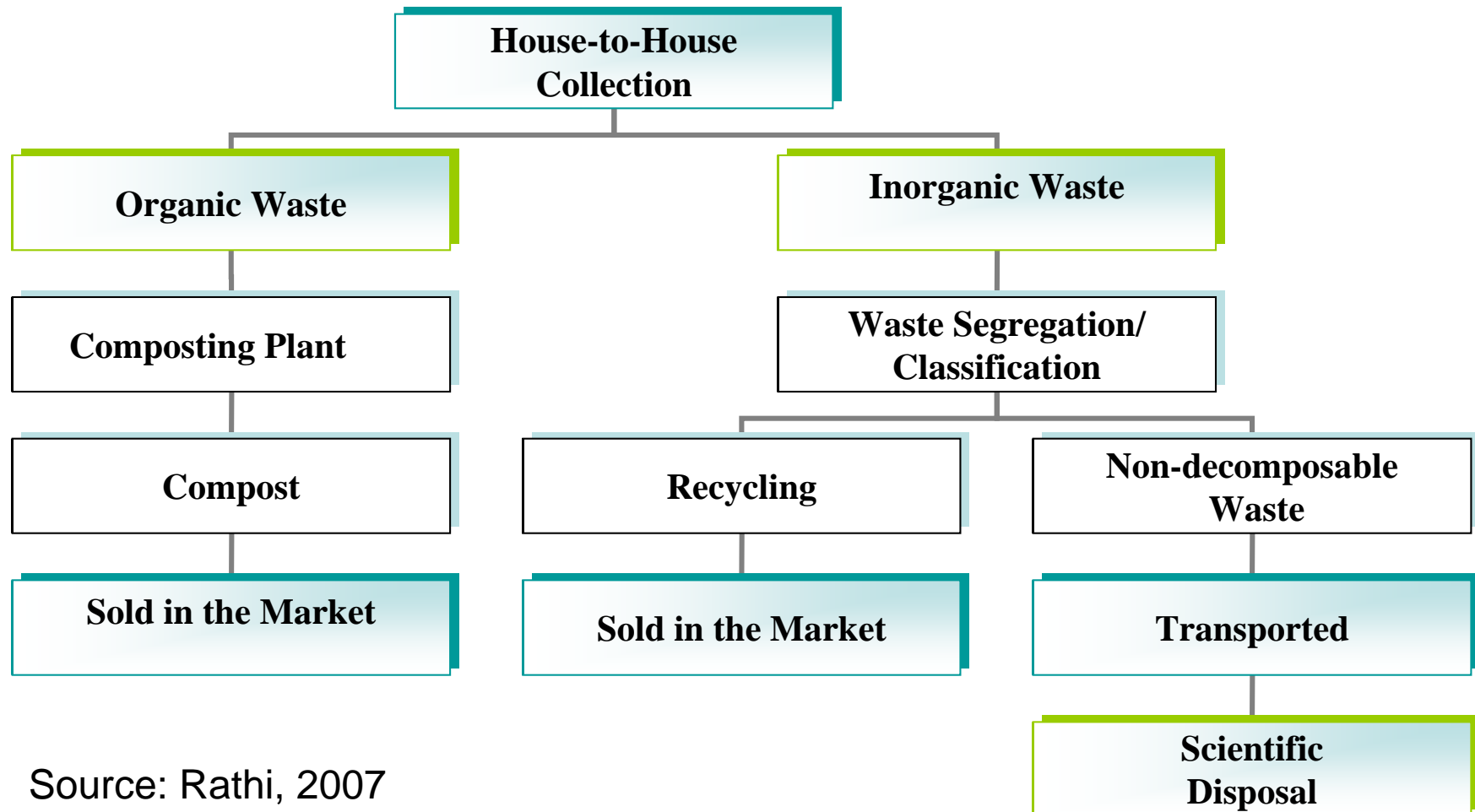


Potential EFR options in SWM

- Three different coloured containers for HHs and motivate them to classify their waste into recyclables, organics and in-organics at their home
- Involve private sector/NGOs
- Give incentives of cut in user charges, deposit refund mechanism
- Extend non-monetary motivation by awarding shields, certificates, prizes



Integrated SWM



Source: Rathi, 2007



Potential for Revenue Generation in SWM

Table 4: Potential for Revenue Generation

Items	Estimates
Projected Urban Population	188868*
Non-Poor Urban Population	166204
Average HH size	6.4**
Non-Poor HHs	25969
Average WTP	35
Revenue potential per month	9,08,927
Revenue potential per annum	1,09,07,124
Revenue potential per month with higher charge***	12,98,450
Revenue potential per annum with higher charge***	1,55,81,400

* Projected urban population

** District Census Report, 1998

*** Rs. 50



Conclusion

- **Pro-poor Development - Engage and encourage the poor to have sustainable development**
- **Facilitate the poor through EFR**
- **Subsidise the poor and tax the rich**
- **Streamline scavengers**
- **Improve efficiency of the marginalized TMA workers**
- **Tax the polluters (PPP) and spend the money on the sector from which it is generated**



**Thanks
for
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