A framework for analysing poverty and inequality in GIS

Gina Weir-Smith
Chief GIS Specialist

HSRC GIS Centre
Pretoria

HSRC Conference
July 2003

301
HSRC Conference
A framework for analysing poverty and inequality in GIS
Gina Weir-Smith
Chief GIS Specialist

Outline
Measuring poverty and solutions
Multi-dimensional facets of poverty
  • Urbanisation
  • Migration
  • Welfare
  • Poverty
  • Development funding
  • Environment
Concluding remarks
Measuring poverty

Economic
- Lack of income

Social
- Lack of nutrition
- Urbanisation
- Lack of sanitation
- Lack of access to education

Environment
- Lack of access to opportunities

Primary School Enrolment and Land Degradation

Source: UNEP
Why poverty maps?

Displays geographic variance
Identifies geographic factors influencing poverty
Improves targeting of resources and interventions
Communicates information about poverty
Acts as policy development tool
Aids as research tool

Urbanisation

Characteristics
- Loss of fertile soil
- Pollution of water bodies (dumping)
- Unplanned settlements
- Improper waste/sewerage disposal
- Vehicle emissions/ Influx of people
- Impact on human health and living conditions

Requirements to address it
- Detailed data on a local level
- Data on population, land availability, new developments, accessibility, etc.
Urbanization
1996 Census

Percentage urban households

- 0.00 to 20.00
- 20.00 to 40.00
- 40.00 to 60.00
- 60.00 to 80.00
- 80.00 to 100.00

Migration

People movements:

- Job opportunities
- Refugees (forced to immigrate)
- Exiles (displaced within own country)
- Access to education
- Access to infrastructure
- Political restructuring
Social Development

National level indicators
Subsidies and intervention schemes
Location and number of beneficiaries
Reduce payments to non-poor people
Efficiency
Pension pay points

Legend
- Pay point
- Poverty

Poverty

Visual comparison to identify spatial clusters or trends
Detailed data required at local level
Mapping as research tool
  • Individualistic explanations
  • Structural explanations
Locating the poor

Development funding

Funding for development
Different levels of government
Identify:
- Amount
- Purpose
- Financial year
- Donor
- Source
Compare at same spatial level
Community Municipal Infrastructure Programme (CMIP)

2000 PROJECTS SPENDING
Department of Provincial and Local Government, 1999

BUDGET (R'1000)  
- 19.5 - 428.4  
- 428.4 - 1186.3  
- 1186.3 - 2571.7  
- 2571.7 - 5106.2  
- 5106.2 - 34770.0  
- No spending

Conclusion

Identify inputs to data set
Database design
Update data
Interpret data
Data dissemination