



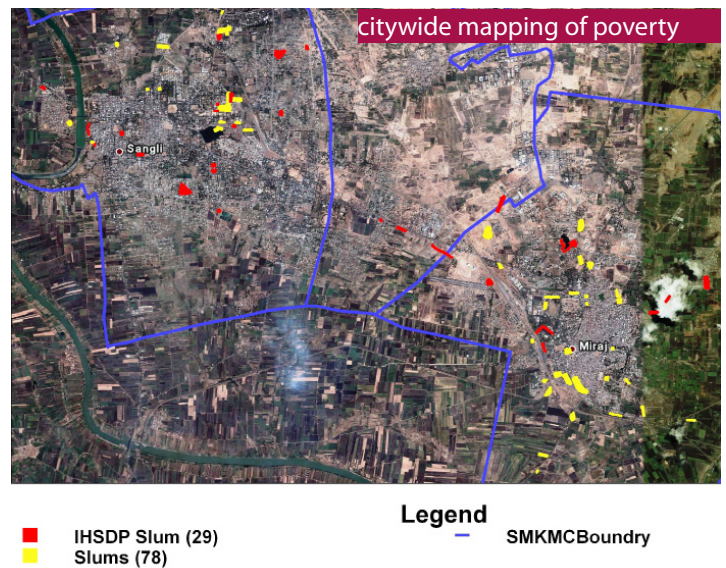
# GIS and Remote sensing technology for mapping poverty

In 1999, Shelter Associates pioneered the use of GIS technology for mapping poverty. Over the years has been advocating a citywide approach to planning for the poor based on the findings of this spatial data. This approach is now a policy under RAY

## Citywide surveys

Mapping poverty using GIS and remote sensing technology allows spatial querying of data and hence becomes an important tool in effective planning for the degraded pockets across the city. Spatial data is critical in establishing gaps in service delivery as well as helps in optimal use of scarce resources like land.

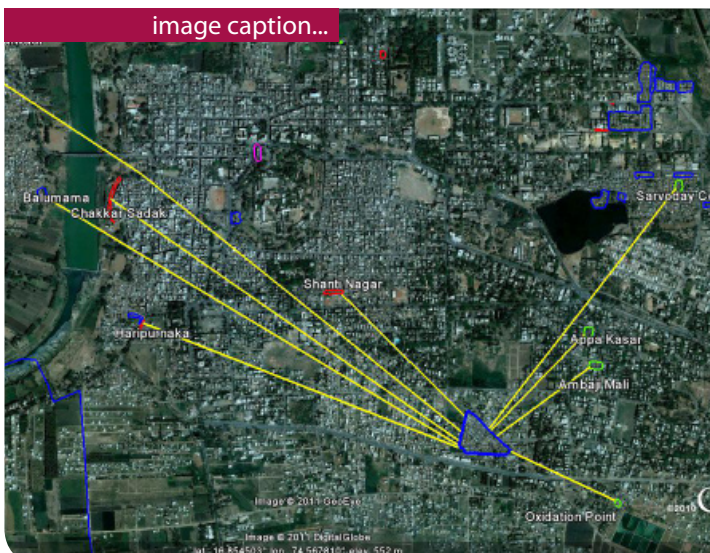
In Sangli, Shelter carried out city wide surveys of all slums within the city's limits with the active participation of community members. The google earth image was used as a base map for digitizing slum boundaries. The gathered data and map were integrated on a GIS platform and the results were compiled in a factsheet for each slum which was attached to the slum boundary on Google earth. For the first time the city could see how their 78 slums were spread across and what was the status of various amenities in each



of them. It was found that 35 slums would have to be relocated as they were either along the roads to be widened or had other reservations on them.

SA was able to plan out their relocation to neighboring sites within 2-2.5 kms of their existing place of occupation. This planned approach with great consideration for 'origins and destinations' for slums to be relocated ensured that this did not take the communities far away from their current places of work or other social amenities like school, markets, etc.

The final project has 22 sites relocating to 7 slum sites where the existing families will be rehabilitated insitu. In all 29 slums will be rehabilitated i.e. for 45% of the total city's poor.



The image shows the location of Indra Nagar slum and the 9 slums relocating on it



### Legend

Structure use	<span style="color: green;">■</span>	Residential (885)	<span style="color: blue;">■</span>	Community Toilet (2)
	<span style="color: orange;">■</span>	Shop (12)	<span style="color: purple;">■</span>	Unknown (23)
	<span style="color: red;">■</span>	Amenities (16)	<span style="color: yellow;">■</span>	Total Houses (938)

- The above map shows a spatial query run through the largest slum in Sangli- Indiranagar to see the breakup of the existing use of structures. The map below gives the breakup of distribution of electricity for the same settlement. This kind of querying pinpoints the gaps in service delivery for various amenities like water, sanitation, etc.



### Legend

Electricity Meter	<span style="color: green;">■</span>	Owned (429)	<span style="color: blue;">■</span>	NR (2)
	<span style="color: red;">■</span>	Borrowed (171)	<span style="color: yellow;">■</span>	Total Houses (938)
	<span style="color: purple;">■</span>	NA (336)		