

UNIVERSITY OF TWENTE.

*Presented at the FIG Congress 2018,
May 6-11, 2018 in Istanbul, Turkey*

LAND VALUATION IN SUPPORT OF RESPONSIBLE LAND CONSOLIDATION ON GHANA'S RURAL CUSTOMARY LANDS

by

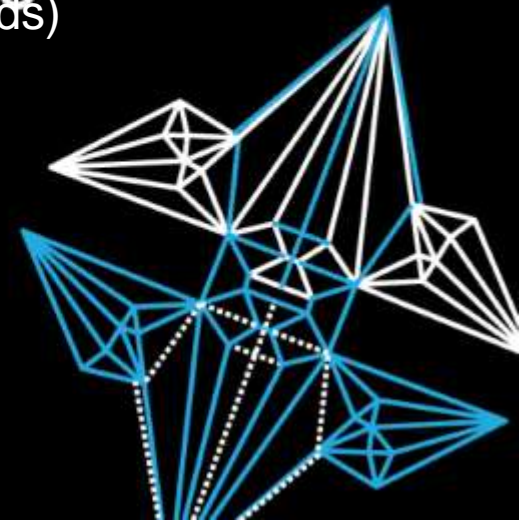
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XXVI FIG Congress Istanbul
6th to 11th May 2018





SETTING THE SCENE

BACKGROUND OF LAND CONSOLIDATION

- Farmland parcel exchange, reallocation, and expansion
- Three key stages – data preparation, inventory and planning, and implementation.
- Land valuation falls under inventory stage.





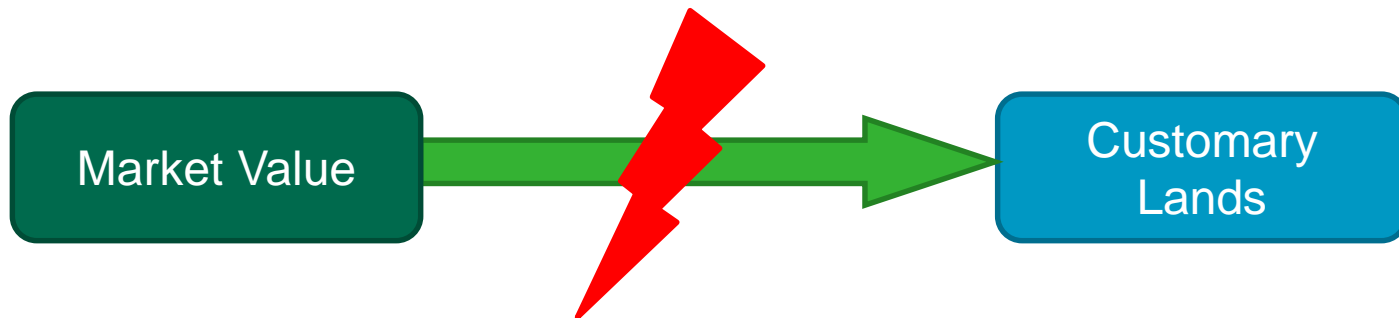
LAND VALUATION AND LAND CONSOLIDATION

BASES OF VALUE

- Agronomic Value (Soil productivity and quality)



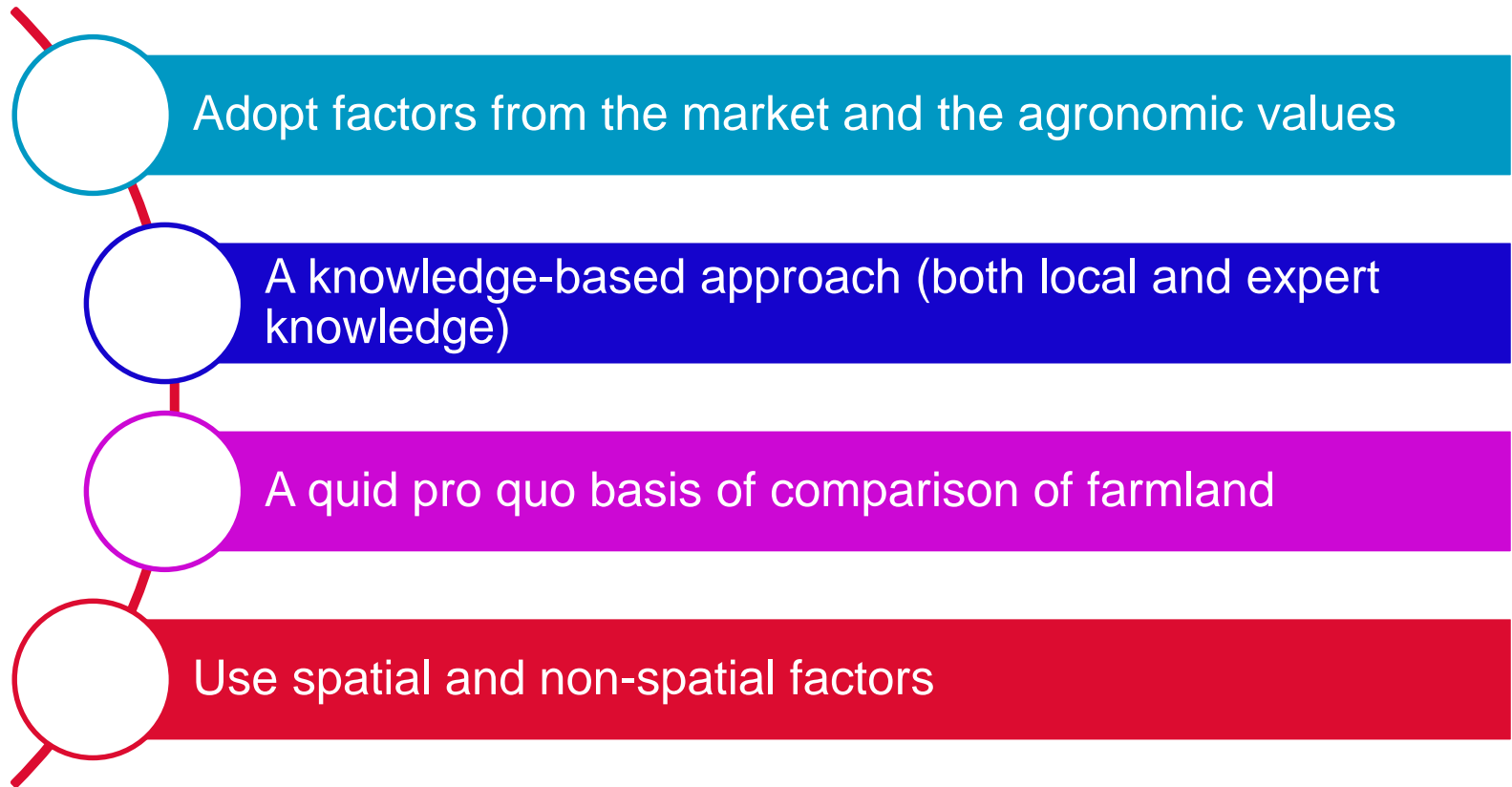
- Market Value





FRAMEWORK FOR A VALUATION APPROACH

LAND VALUE INDICES





LAND VALUE INDICES

THE PROCESS



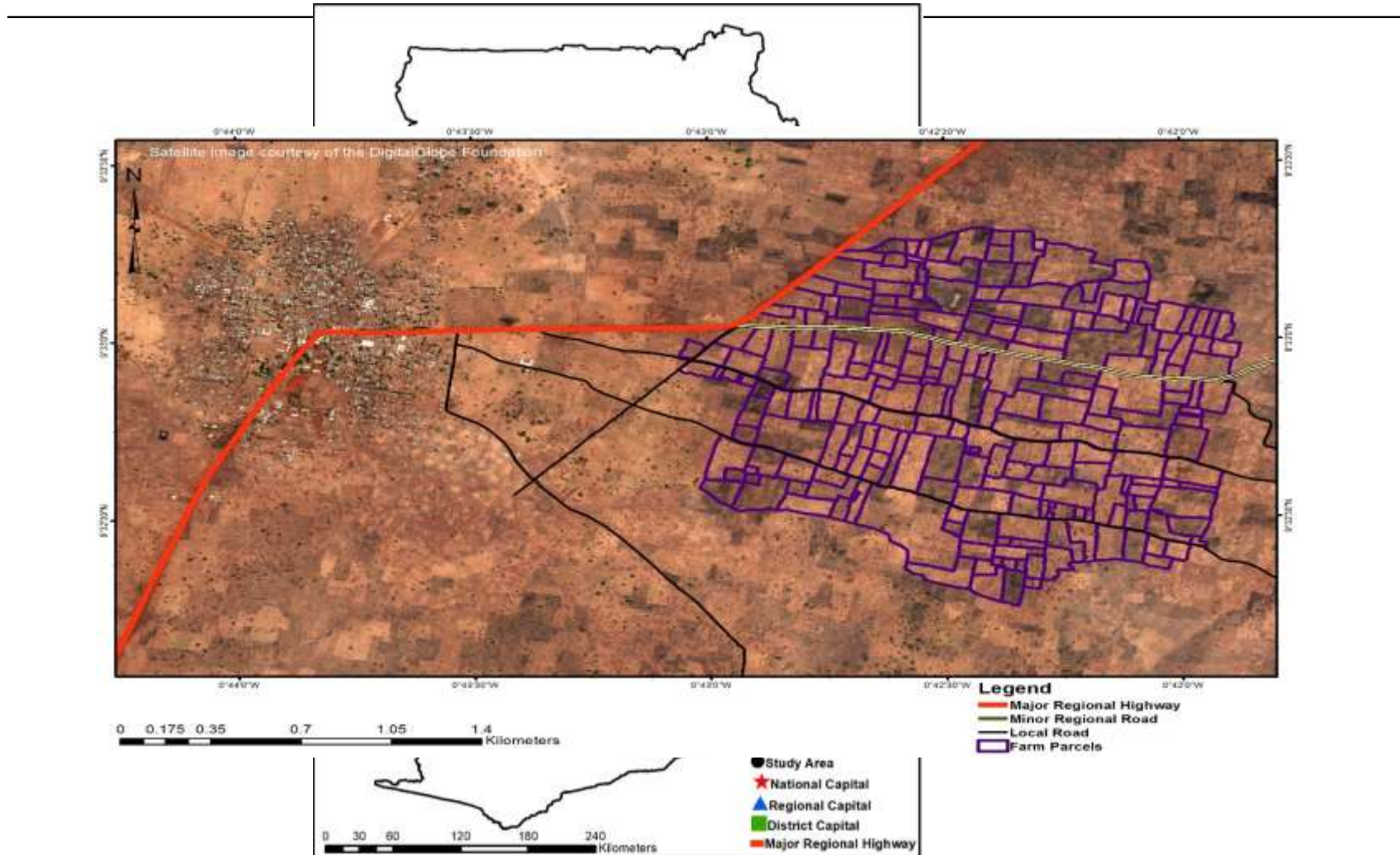
- Identify the relevant Land Value Factors (f) in the project area
- Weight and rank the various factors (Standardize scores (S) with direct value rating)
- Select the range for standardized scores (0-1)
- Define the qualitative characteristics of the value function
- Specify the values for the selected attribute scores
- Fit a mathematical equation/curve through the identified points.
- Apply the weight of the LVF scores (W) and sum up their averages for each parcel (p).

$$LVI_p = \sum_{p=1}^n S_{fp} W_f$$





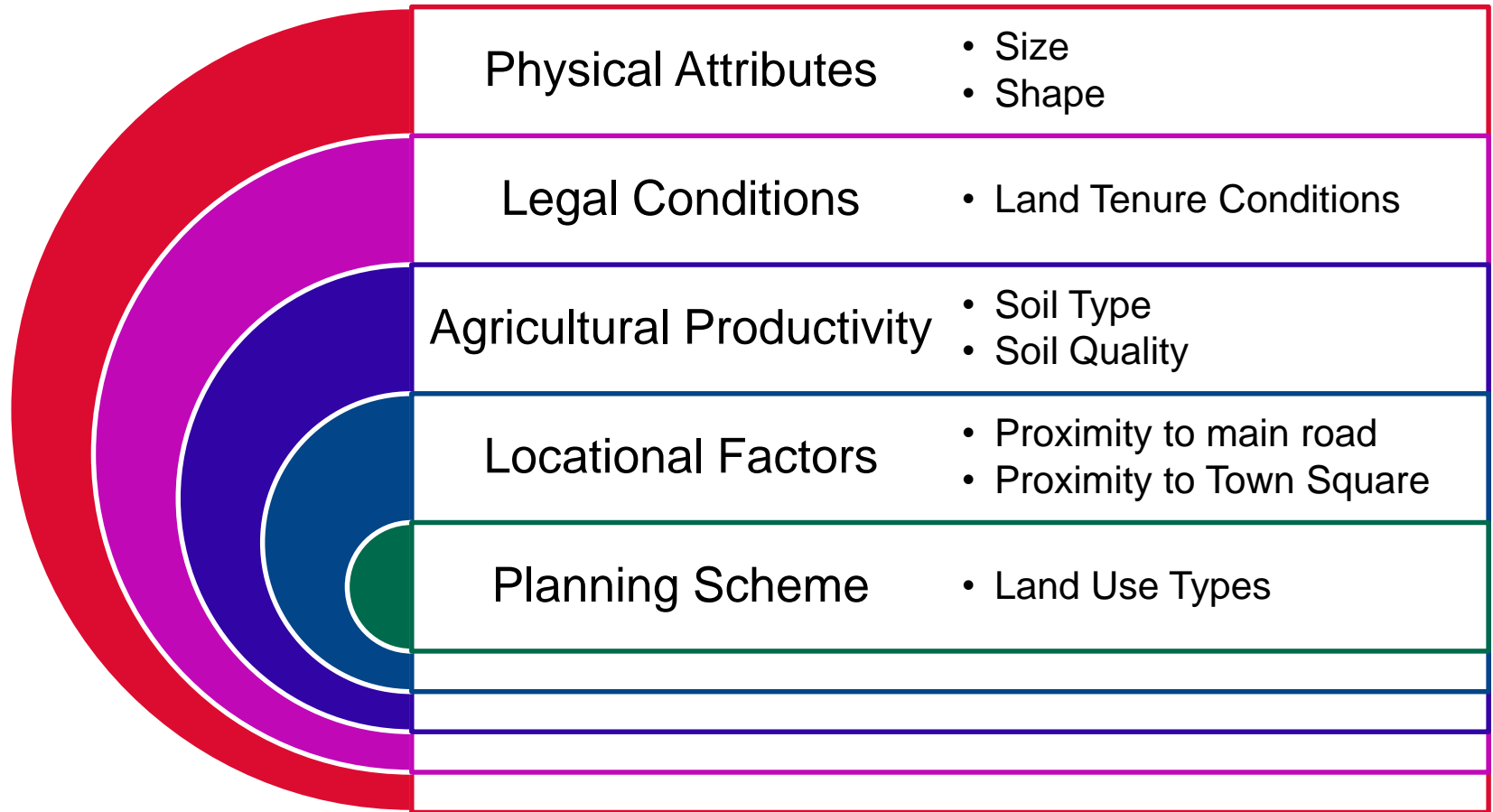
CASE STUDY – NANTON, GHANA





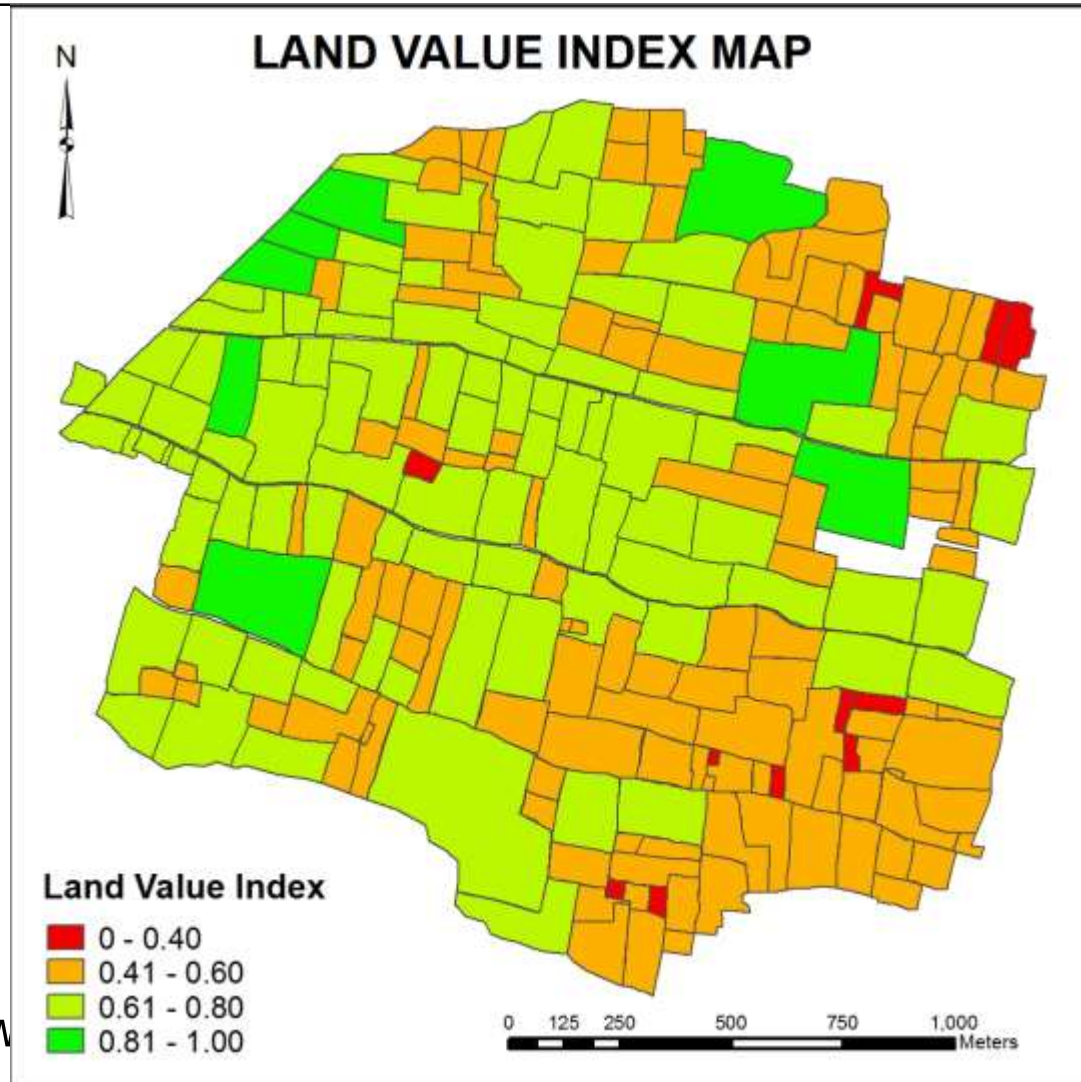
LAND VALUE FACTORS

EXAMPLES



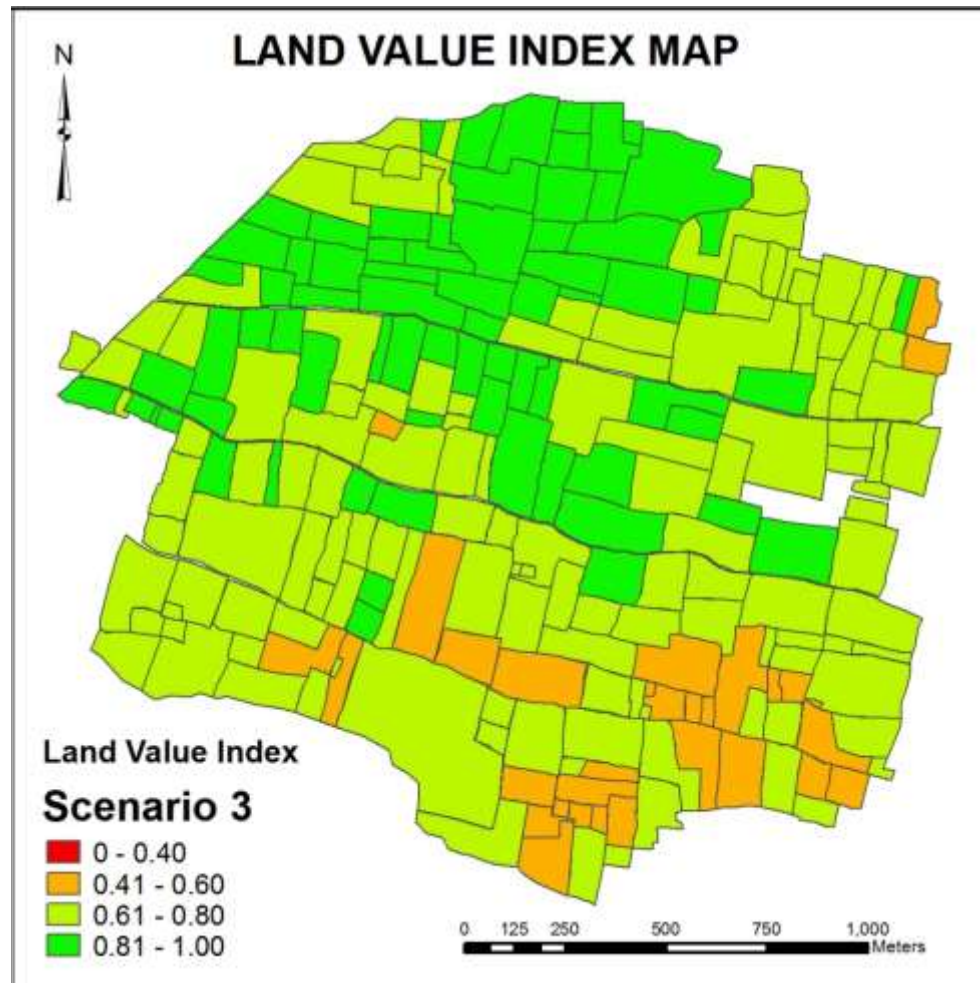


THE LAND VALUE INDEX MAP



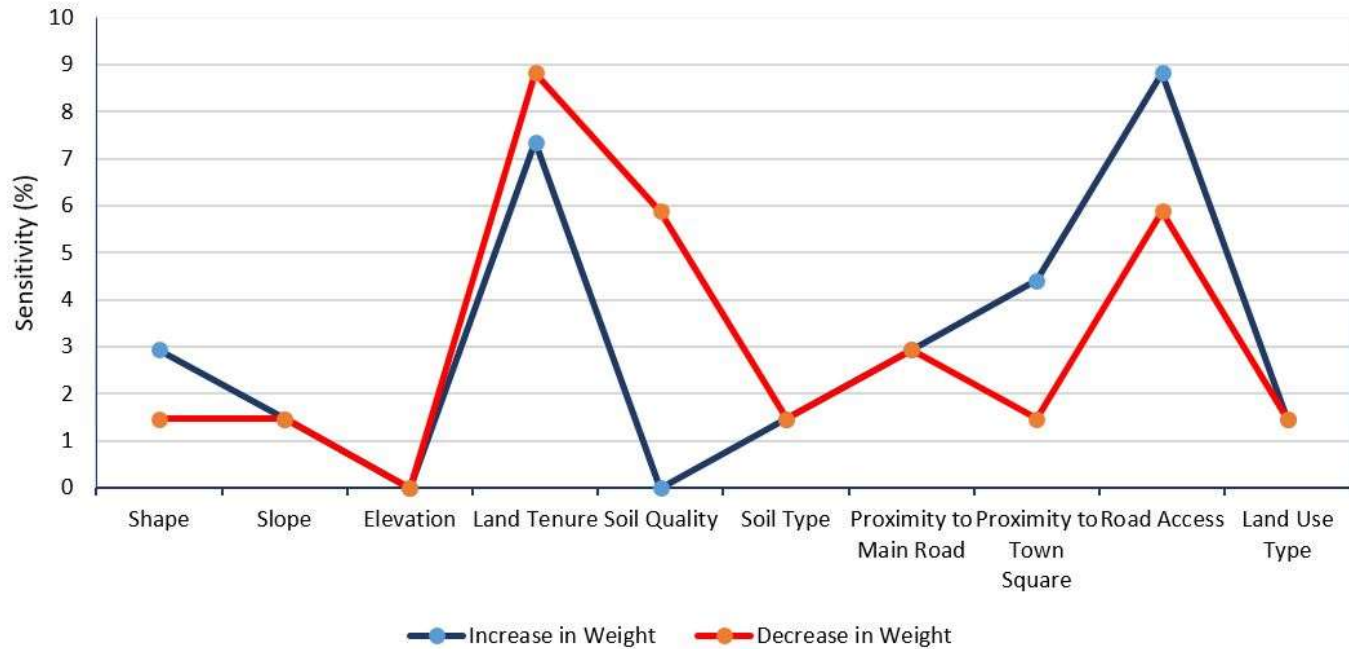


SCENARIO ANALYSIS





SENSITIVITY ANALYSIS





INFLUENCE OF AUTOMATIC VALUATION MODELS



- Simplicity
- Fast
- Low Cost
- Automation and uniformity





LOOKING AHEAD

- Further verification
- Compatibility with land reallocation
- Use of other purposes of valuation



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THANK YOU!!!





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