



COMMUNITY PERCEPTIONS AND ENGAGEMENT IN URBAN FOREST CONSERVATION: SOCIO-DEMOGRAPHIC, SPATIAL, AND INSTITUTIONAL ANALYSIS FROM SITU GEDE, BOGOR CITY

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POSTGRADUATE STUDY PROGRAM OF FOREST MANAGEMENT SCIENCE
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SUMMARY

Alexis Mizero. Community Perceptions and Engagement in Urban Forest Conservation: Socio-Demographic, Spatial, and Institutional Analysis from Situ Gede, Bogor City. Supervised by LETI SUNDAWATI and SONI TRISON.

Urban forests play an important role in maintaining ecological balance while providing recreational and social benefits. However, land-use change and urbanization pose significant challenges to the sustainability of the Situ Gede urban forest. This study analyzes community perceptions and engagement in urban forest conservation in Situ Gede Village, Bogor City, and examines the influence of socio-demographic, spatial, and institutional factors on participation. The mixed-method design was applied, which included a household survey of 119 individuals, 5 key informant interviews, spatial proximity analysis with ArcMap 10.8, Spearman rank correlation, and the Analytical Hierarchy Process (AHP). The findings show that the perception of urban forest conservation is high at the community level ($M = 4.20$); more so in enhancing air quality ($M = 4.38$), flood mitigation ($M = 4.31$), and biodiversity preservation ($M = 4.29$). Conversely, the level of community engagement is moderate ($M = 3.72$) even though the desire to do so is quite high ($M = 3.94$). Financial incentives exhibit little effect on motivation ($M = 3.22$), meaning that the participation is more related to intrinsic and socio-cultural values. Spatial analysis indicates that respondents who reside within 0-500 m of the forest have a better perception score as compared to those living beyond that area, but there is no significant difference in the level of engagement. The results of Spearman correlation analysis indicate weak and moderate positive correlations among education and perception ($r = 0.32$, $p < 0.01$), perception and engagement ($r = 0.21$, $p < 0.05$) and perception and institutional trust ($r = 0.29$, $p < 0.01$), with distance demonstrating a weak negative correlation with perception ($r = -0.30$, $P < 0.01$). The AHP findings indicate that the perceived benefits, distance and length of residence have a relatively higher position in their respective criteria structures. The weights, however, can only be understood in relation to each decision hierarchy and not directly in comparison between factors.

On the whole, the results show that there is a discrepancy between high ecological knowledge and moderate involvement. The psychological and institutional factors seem to have stronger relationships with community engagement as compared to demographic features. The research paper emphasizes the significance of collaborative urban forest management, enhanced institutional trust, and spatially specific interventions in improving participatory and sustainable conservation.

Keywords: Analytical Hierarchy Process; Community engagement; Spatial analysis; Urban forest conservation.

RINGKASAN

Alexis Mizero. Community Perceptions and Engagement in Urban Forest Conservation: Socio-Demographic, Spatial, and Institutional Analysis from Situ Gede, Kota Bogor. Dipimpin oleh LETI SUNDAWATI DAN SONI TRISON.

Hutan kota berperan penting dalam menjaga keseimbangan ekologi serta menyediakan sarana rekreasi dan sosial. Namun, perubahan penggunaan lahan dan urbanisasi menjadi tantangan bagi keberlanjutan hutan kota di Situ Gede. Penelitian ini menganalisis persepsi dan keterlibatan masyarakat dalam konservasi hutan kota di Situ Gede, Kota Bogor, serta mengkaji pengaruh faktor sosiodemografis, spasial, dan institusional terhadap partisipasi masyarakat. Penelitian ini menggunakan pendekatan metode campuran, meliputi survei rumah tangga terhadap 119 responden, wawancara dengan informan kunci, analisis kedekatan spasial menggunakan ArcMap 10.8, korelasi peringkat Spearman, serta Analytical Hierarchy Process (AHP). Sebagian besar responden berada pada usia produktif (47,9%), berpendidikan menengah atas (45,4%), dan telah tinggal lebih dari 10 tahun (80,7%). Sekitar 51,3% responden tinggal dalam radius 0–500 meter dari kawasan hutan. Hasil penelitian menunjukkan bahwa persepsi masyarakat terhadap konservasi hutan kota tergolong tinggi ($M = 4,20$), terutama terkait manfaat peningkatan kualitas udara ($M = 4,38$), pengurangan banjir ($M = 4,31$), dan pelestarian keanekaragaman hayati ($M = 4,29$). Sebaliknya, tingkat keterlibatan masyarakat berada pada kategori sedang ($M = 3,72$), meskipun terdapat kecenderungan niat partisipasi yang relatif tinggi ($M = 3,94$). Insentif finansial menunjukkan pengaruh yang terbatas terhadap motivasi ($M = 3,22$), sehingga partisipasi lebih berkaitan dengan nilai intrinsik dan sosial-budaya. Analisis spasial menunjukkan bahwa responden yang tinggal dalam jarak 0–500 meter memiliki skor persepsi yang lebih tinggi ($M = 4,36$) dibandingkan dengan yang tinggal lebih jauh ($M = 4,03$), namun tidak terdapat perbedaan yang berarti dalam tingkat keterlibatan. Analisis korelasi Spearman menunjukkan hubungan positif yang lemah hingga sedang antara pendidikan dan persepsi ($r = 0,32$; $p < 0,01$), persepsi dan keterlibatan ($r = 0,21$; $p < 0,05$), serta persepsi dan kepercayaan terhadap institusi ($r = 0,29$; $p < 0,01$). Jarak menunjukkan korelasi negatif yang lemah terhadap persepsi ($r = -0,30$; $p < 0,01$). Hasil AHP menunjukkan bahwa manfaat yang dirasakan, jarak, dan lama tinggal merupakan faktor dengan bobot relatif lebih tinggi dalam masing-masing struktur kriteria. Namun, bobot tersebut diinterpretasikan dalam konteks hierarki masing-masing dan tidak dibandingkan secara langsung antarfaktor. Secara umum, penelitian ini menunjukkan adanya kesenjangan antara tingkat kesadaran ekologis yang tinggi dan keterlibatan masyarakat yang masih moderat. Keterlibatan masyarakat cenderung lebih dipengaruhi oleh faktor psikologis dan institusional dibandingkan dengan faktor demografis. Temuan ini menekankan pentingnya pengelolaan hutan kota yang kolaboratif, peningkatan kepercayaan terhadap institusi, serta intervensi berbasis spasial untuk mendorong konservasi hutan kota yang lebih partisipatif dan berkelanjutan.

Kata kunci: Analisis spasial; Keterlibatan masyarakat; Konservasi hutan kota; Proses Hierarki Analitik.



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A Research Thesis
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of the Master of Science (MSc) degree
in Forest Management Science

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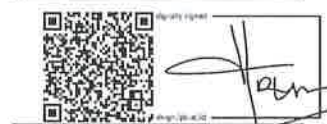
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Bogor, May 2026

Alexis Mizero



LIST OF CONTENT

LIST OF TABLES	x
LIST OF FIGURES	xi
LIST OF APPENDICES	xi
INTRODUCTION	1
1.1 Background	1
1.2 Problem statement	2
1.3 Objectives	3
1.4 Research Benefits	3
1.5 The Scope of Research	3
LITERATURE REVIEW	4
2.1 Definition and Background of Urban and Peri-urban Forestry Globally	4
2.2 Global Perspective on Urban and Peri-urban Forestry	4
2.3 Urban and Peri-urban Forestry Management in Indonesia	4
2.4 Theoretical framework	5
METHODOLOGY	7
3.1 Time and Place	7
3.2 Research Procedure	7
3.3 Method and Materials Tools	8
3.4 Sampling Design	8
3.5 Validity and Reliability of the Instrument	9
3.6 Data Analysis	9
3.7 Analytical Hierarchy Process	10
3.8 Integrated Methodological Framework and Triangulation Approach	10
RESULTS AND DISCUSSION	12
4.1 Results	12
4.2 Discussion	23
CONCLUSION AND RECOMMENDATION	26
5.1 Conclusion	26
5.2 Recommendation	26
REFERENCES	28
APPENDICES	32
BIOGRAPHY	38

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LIST OF TABLES

1	Demographic profile of respondents (N = 119)	13
2	Mean scores of respondents' perception toward urban forest conservation	14
3	Mean scores of respondents' engagement toward urban forest conservation	15
4	Mean scores of respondents' institutional trust toward urban forest conservation	16
5	Barriers to community engagement in urban forest conservation	20
6	Results of weight calculation and criteria prioritization using AHP	23

LIST OF FIGURES

7	Research Theories	6
8	Map of study area	7
9	Integrated methodological triangulation framework	11
10	Overall mean scores of perception, engagement, and institutional trust	17
11	Mean engagement and perception scores based on distance	17
12	Spatial pattern of land cover and respondents	18
13	Spearman's correlation matrix among demographic variables and key constructs	19
14	Respondents' suggestions for improving urban forest conservation	21

LIST OF APPENDICES

15	Spearman's Correlation Matrix among Demographic Variables and Key Constructs	32
16	Land Cover in Situ Gede Village	33
17	Matrix of Community Perception Variables	34
18	Matrix of Community Engagement Variables	35
19	Matrix of Institutional Trust Varia	36
20	Matrix of Demographic and spatial factors	37
21	Weight of Criteria	37