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3 **CONTESTED GROUNDS: NAVIGATING ENVIRONMENTAL VS SOCIAL AND INSTITUTIONAL**
4 **CONFLICTS IN UP DILIMAN ARBORETUM.**
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9 **Abstract**

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12 *The UP Diliman Arboretum represents a contested urban landscape where nature protection, social justice, and*
13 *institutional development intersect, resulting in conflicts among conservation priorities, community settlement, and*
14 *governance. The present study considers the roles of stakeholders, including the UP administration, arboretum*
15 *community, academic institutions, and environmental supporters, using a power-interest matrix to demonstrate how*
16 *authority, negotiation, and daily practices influence land use and community dynamics. As both a protected green*
17 *space and a site of long-term habitation facing development pressures, the Arboretum exemplifies persistent and*
18 *evolving tensions rooted in shifting values and priorities, often to the detriment of the environment, which cannot*
19 *speak for itself. Ultimately, this case illustrates how contested ecologies mirror broader struggles over environment,*
20 *equity, and development, with outcomes determined by the collaboration of different outlooks and actions.*

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22 **Key words:-**

23 Arboretum, Contested Spaces, Environment, Stakeholders, UP Diliman.
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26 **Introduction:-**

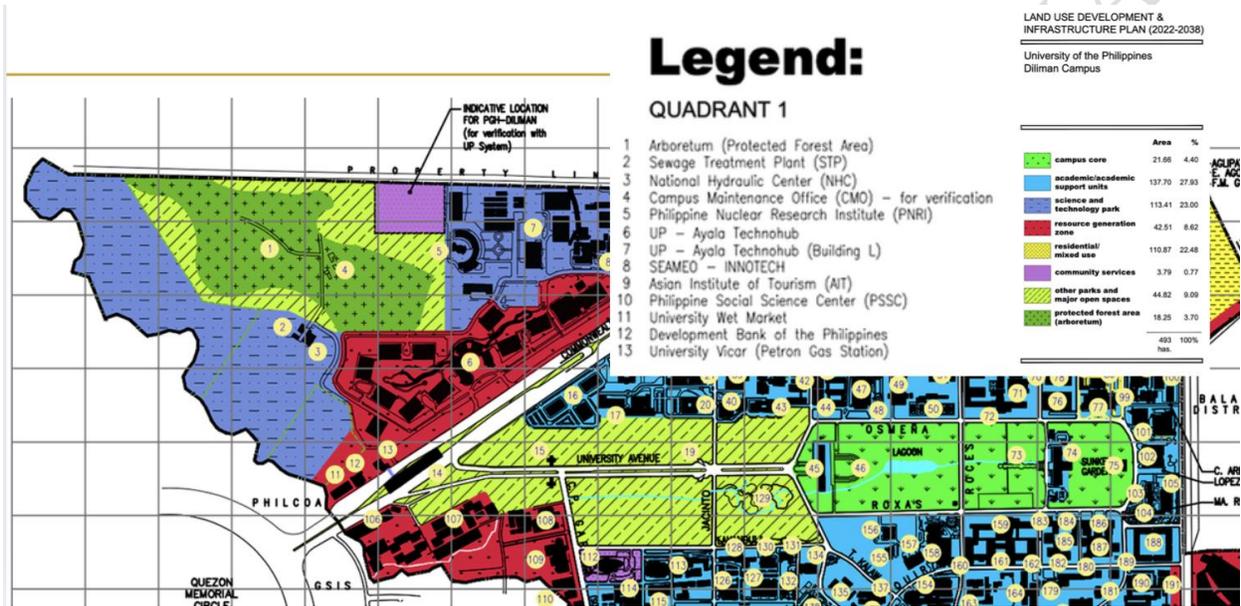
27 Contested spaces arise where competing interests intersect, transforming physical environments into arenas for
28 struggle, negotiation, and the construction of meaning (Aulich & Dawson, 2007). Reyes (2016) characterizes these
29 spaces as sites of power relations, where dominant groups attempt to assert control or establish boundaries, while
30 marginalized communities resist, reclaim, or reshape them. These spaces inherently may embody multiple, even

31 contradictory, interpretations (Jansson, 2018). Such spaces are dynamic, continually reshaped through contestation
32 as norms, identities, and boundaries are challenged and redefined. The outcomes of these struggles are often
33 tangible, resulting in community displacement, ecological degradation, or changes in urban policy.

34 The University of the Philippines (UP) Arboretum in Diliman serves as a prominent example of a contested urban
35 space. Covering approximately 18 hectares along Central Avenue at the campus's northern edge, it is bordered by
36 the Philippine Nuclear Research Institute (PNRI) to the east, Pael subdivision to the southwest, a sewage treatment
37 plant, and the Ayala TechnoHub to the south (Dovey & Recio, 2024). Established in 1948 on land acquired by the
38 Philippine Commonwealth government in 1938, the Arboretum initially functioned as a forest nursery before its
39 transfer to UP and subsequent administration by UP Diliman in 1962. The site's layered history traces back to Jesuit
40 estates during the Spanish colonial period, later acquired by the Tuason family in the nineteenth century, and
41 ultimately incorporated into the UP campus extension (University of the Philippines-Diliman, 2021).

42 Currently, the Arboretum serves as both an ecologically significant site and informal settlement, and is occasionally
43 used for academic purposes. The 2015 census reported approximately 3,500 residents (Philippine Statistics
44 Authority, 2023), while a United Nations Development Programme (UNDP) study identified 550 informal settler
45 families (ISFs), totaling 2,079 residents (United Nations Development Programme, n.d.). In October 2020, the UP
46 Board of Regents reclassified 9.5 of the Arboretum's 18 hectares from "protected forest area" to "academic support
47 zone/open space." This reclassification facilitated proposals to construct the UP Philippine General Hospital in
48 Diliman (Figure 1.), resettle displaced residents, and develop retail spaces along Central Avenue (The University of
49 the Philippines Gazette, 2020).

50 Despite ongoing development initiatives, the Arboretum remains recognized as a biodiverse urban forest and has
 51 been the focus of petitions and opposition from environmental and community groups. It contains approximately 77
 52 of the 192 plant species found at the University, representing 9,298 of the institution's total 38,569 (Abiding et al.,
 53 2003). Consequently, the Arboretum exemplifies the tensions among environmental conservation, urban
 54 development, and social displacement. The management of an ecologically significant site that also supports a
 55 resident community necessitates the involvement of multiple stakeholders (International Model Forest Network,
 56 2025). Landowners hold legal authority, existing communities interact with and benefit from the site, and site
 57 maintenance personnel are responsible for conservation and taking care of it (*DENR Administrative Order No. 2004-*
 58 *32, 2004*). When the site is formally designated as protected, environmental advocates and conservation
 59 organizations play a critical role in ensuring biodiversity preservation and alignment with broader sustainability
 60 objectives. Effective collaboration among these groups is essential to balance ecological protection with community
 61 needs, thereby fostering both resilience and social value.



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65 A comprehensive understanding of the Arboretum requires recognizing its diverse and interconnected values.
 66 Ecologically, the Arboretum sustains biodiversity, maintains habitat connectivity, stores carbon, and regulates urban
 67 climate and pollution. In addition to these ecological functions, it provides key necessities for marginalized
 68 households, including shelter, food, and livelihoods, which support its purpose as a provider. Its social and cultural
 69 meaning is shown by opportunities for recreation, heritage preservation, and contributions to social health. However,
 70 market forces increasingly position the land as a financial asset, often to justify redevelopment. These overlapping
 71 values highlight the reciprocal relationship between place attachment and place identity, in which emotional bonds
 72 and self-concept influence stewardship behaviors and strengthen contested claims to space (Maricchiolo et al.,
 73 2021).

74 This interconnection of values is further demonstrated by the Arboretum's spatial intricacy. The site serves
 75 simultaneously as a location for academic research and laboratory work, a protected green space, a settlement for
 76 informal communities, and an institutional property facing development pressures. For decades, these overlapping
 77 roles have generated conflicts among settlers, environmentalists, and the UP administration, indicating broader
 78 struggles over conservation, social justice, and modernization. Thus, the Arboretum represents more than a physical
 79 landscape; it functions as a microcosm of contested urban spaces, embodying the tensions and negotiations that
 80 shape the city's transforming identity.

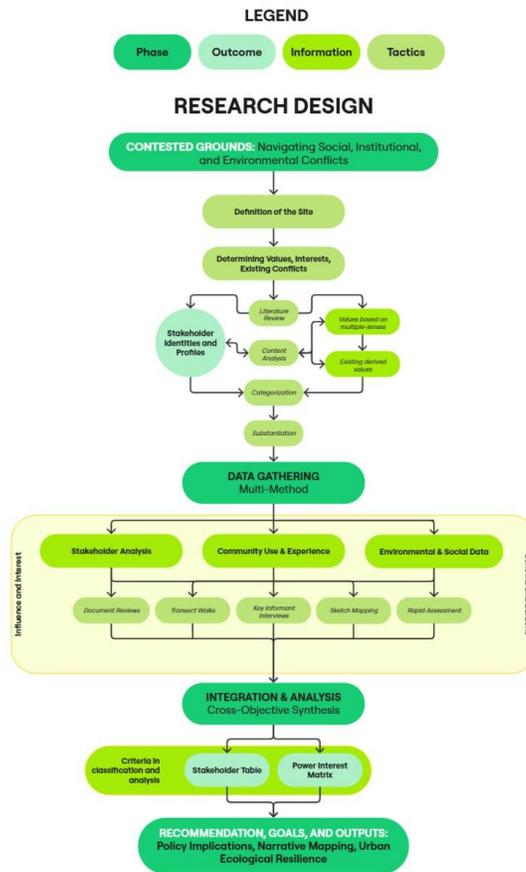
81 In light of these intersecting conflicts, this study asks: How do spatial tensions within the UP Diliman Arboretum
 82 dictate the distribution of socio-environmental benefits and burdens among its institutional, environmental, and

83 community stakeholders? By treating the Arboretum as a manifestation of contested urban space, this study aims to:
 84 (1) identify the key stakeholders and their intersectional power dynamics; (2) examine how the benefits and burdens
 85 of spatial tensions are distributed among these actors; and (3) analyze the resulting socio-environmental implications
 86 for the site's ecological future. Addressing these questions is particularly urgent given that existing governance
 87 frameworks have yet to formally reconcile the competing claims of ecological preservation, informal settlement, and
 88 institutional development within the site. The Arboretum serves as a lens through which broader struggles over
 89 urban green space governance in rapidly urbanizing cities in the Global South can be critically examined.

90

91 **Methodology:-**

92 This study employs a qualitative research methodology characterized by a structured and sequential process. The
 93 process begins with defining the scope and stakeholders based on the time that the Arboretum was declared a
 94 protected landscape up to present, proceeds to data collection, integrates and analyzes findings, and concludes with
 95 the formulation of recommendations. This approach ensures that the research remains comprehensive, inclusive, and
 96 firmly grounded in qualitative evidence.



97 The initial phase centers on research design, during which the site is delineated by its geographical and conceptual
 98 boundaries. This process establishes the study's parameters and clarifies the specific area of concern. Concurrently,
 99 the values, interests, and existing conflicts within the site are identified to highlight the main concerns for various
 100 groups. Stakeholders, including individuals, institutions, and community organizations, are identified and profiled.
 101 These actors are categorized into groups such as government agencies, non-governmental organizations (NGOs),
 102 and residents, advancing a structured understanding of their roles and perspectives. The second phase entails data
 103 collection through a multi-method approach. Stakeholder analysis is performed by reviewing documents, policies,
 104 and organizational networks to ascertain institutional positions and relationships. Community use and experience of

105 the site are documented using participatory methods such as key informant interviews, sketch mapping, and mobile
 106 mapping, which elucidate patterns of interaction and perception. Environmental and social data are also gathered,
 107 including ecological inventories, physical assessments, and analyses of social exclusion and vulnerability.
 108 Collectively, these data streams provide a comprehensive understanding of the site's dynamics. Picture of the site's
 109 dynamics.

110 The third phase concentrates on integration and analysis, during which findings from the various data streams are
 111 synthesized. Power and Interest criteria for both visual and non-visual analysis are established to assess tangible and
 112 intangible aspects of the site (Table 1). Structured tools, including a stakeholder matrix, are utilized to examine
 113 stakeholder connections and the distribution of positive and negative impacts. A central analytical framework in this
 114 phase is the Power-Interest Matrix, also referred to as Mendelow's Matrix. Developed by management professor
 115 Aubrey L. Mendelow in 1991 and informed by R. Edward Freeman's stakeholder theory, this tool categorizes
 116 stakeholders according to their level of power (capacity to influence) and interest (degree of involvement in the
 117 project or organization). The matrix is organized as a grid, with power ranging from low to high on one axis and
 118 interest on the other, resulting in four quadrants (Figure 3.). Stakeholders with high power and high interest are
 119 placed in Q1 and demand thorough engagement as key influencers. Those with high power but low interest should
 120 be in Q2, with their needs fulfilled without excessive engagement. Stakeholders with low power but high interest are
 121 best in Q3 as they may offer important feedback despite limited influence. Finally, those with low power and low
 122 interest require only Q4 and should be monitored but not prioritized. This system informs the synthesis of
 123 stakeholder forces and guides participation approaches.

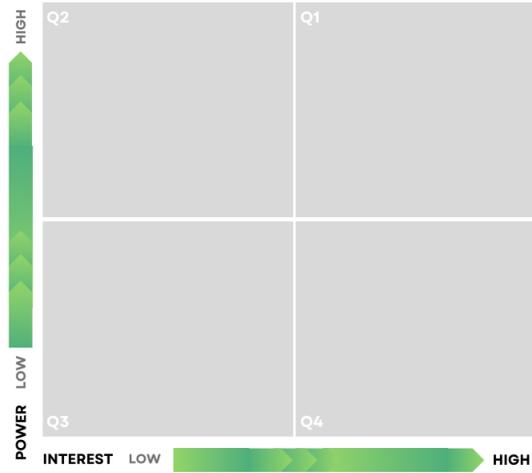
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125 **Table 1.** Power and Interest Rating Criteria

	Power	Interest
Low	Limited resources Minimal access to decision-makers Influence restricted to small-scale advocacy or community-level action	Peripheral involvement No direct livelihood or institutional dependency Passive stance; concern only when directly affected
Moderate	Some organizational capacity Ability to mobilize public opinion or media attention Can negotiate but not dominate decision-making	Regular users or advocates Environmental or cultural value recognized Active but not existentially dependent
High	Formal authority Significant financial or legal resources Direct control over land use, policy enforcement, or institutional decisions	Direct livelihood, identity, or institutional stake Strong emotional, cultural, or economic attachment Persistent engagement in advocacy, negotiation, or resistance

126

127 The final phase translates the analysis into recommendations, goals, and outputs. Policy implications are identified
 128 to propose changes in rules, regulations, or management systems that address the issues uncovered. Narrative
 129 mapping is employed to convey the site's story, integrating its conflicts, opportunities, and possible future paths.
 130 Recommendations prioritize urban ecosystem adaptability by proposing approaches to improve the site's capacity to
 131 adapt to change and withstand social and natural pressures. This method ensures that the study's outputs are
 132 evidence-based, context-sensitive, and actionable, providing meaningful guidance for both policy and practice.



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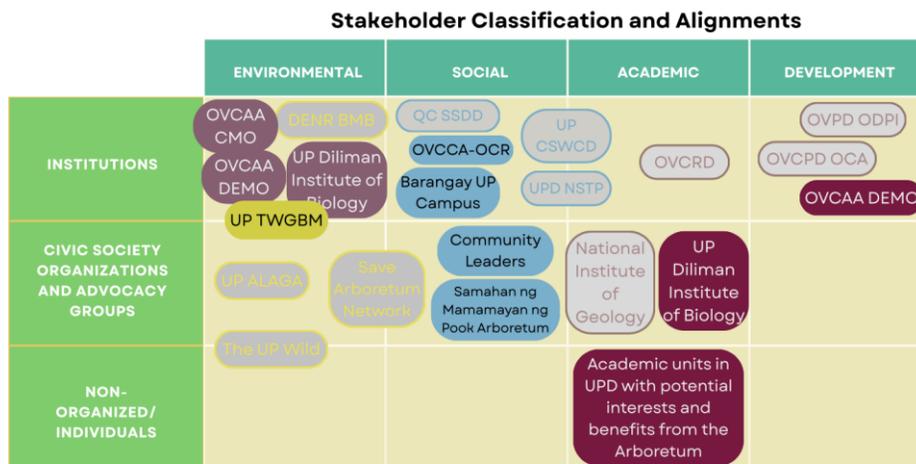
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135 **Findings and Discussion:-**

136 The contested nature of the UP Diliman Arboretum is best understood through the interplay of stakeholder power,
 137 spatial distribution, and socio-environmental consequences. Accordingly, this section first evaluates the power
 138 dynamics of the various actors involved in the site's governance. These institutional and social realities are then
 139 mapped onto the physical landscape through transect walks and spatial analysis to identify who gains or loses within
 140 the current land-use framework. Collectively, these findings provide a basis for analyzing the long-term implications
 141 of these tensions on the site's ecological integrity.

142 **A. Stakeholder Mapping**

143 A comprehensive stakeholder mapping was conducted for the Arboretum to identify the various groups associated
 144 with the site and its future development (Figure 4.). Stakeholders were categorized based on their primary spheres of
 145 influence and engagement since the Arboretum was established as a protected landscape . Environmental
 146 stakeholders were identified for their involvement in conservation, biodiversity management, and ecological
 147 stewardship. Social stakeholders comprised the surrounding communities whose daily lives, cultural practices, and
 148 sense of attachment are closely linked to the arboretum. Academic stakeholders included faculty, researchers, and
 149 students who used the site as a living laboratory and educational resource. Institutional stakeholders were defined as
 150 the decision-makers
 151 makers



152 governance bodies responsible for the arboretum's policy, administration, and long-term planning.

153
 154 This multidimensional approach ensured that the mapping addressed not only the ecological and scientific aspects of
 155 the arboretum but also the social and institutional contexts that influence its use and protection. Categorizing
 156 stakeholders in this manner offers a clearer understanding of their relationships and responsibilities, as well as the
 157 potential for collaboration that supports the arboretum as both a natural refuge and a shared academic-community
 158 resource, although such collaboration is beyond the scope of this study.

159 **B. Key Informant Interview**

160 The UP Arboretum appears as a deeply contested site where generational stewardship, institutional planning, and
 161 nature preservation exist in constant tension.

162 The community narrative, articulated by the Samahan ng Mamamayan ng Pook Arboretum (SMPA), asserts moral
 163 legitimacy based on a timeline of residency dating back to 1962. Central to this story is the role of these residents—
 164 many of whom are descendants of previous university employees—as *de facto* foresters whose historical labor in
 165 planting and maintenance is fundamentally responsible for the area's current ecological state. The formalization of
 166 SMPA in 2010 served as a critical survival mechanism in response to the threats posed by proposed institutional
 167 developments within the Arboretum.

168 Institutional governance of the Arboretum is anchored in a legalistic framework that is less a matter of
 169 straightforward administrative management and more a complex mediation between the university's legal
 170 sovereignty, anchored in its century-old land title (OCT), and the firmly established human narratives of its
 171 occupants. The Office of Community Relations (OCR) manages this tension through a census-based validation
 172 mechanism, using archival records from 1992, 2001, 2011, and 2015 to establish the formal basis for relocation and
 173 resettlement planning. This system operates as a deliberate counter-agreement to summary demolition, delivering an
 174 organized pathway for residents who meet the university's established eligibility criteria to be included in future
 175 housing developments.

176 Within this negotiated framework, the university prioritizes "original" families or recognized owners who appear in
 177 the historical census records. While this approach grants a measure of security and a relocation guarantee for those
 178 validated by the OCR, it simultaneously creates an eligibility distinction that affects the wider community. Residents
 179 categorized as "4-1-7-0s"—primarily renters and sharers who arrived after the specified census periods—remain
 180 outside the primary scope of these formal housing negotiations. Consequently, while the census serves as a

181 protective measure against immediate displacement for some, it also functions as a regulatory boundary that
182 determines who is integrated into the university's long-term infrastructure and relocation plans.

183 Spatial governance under the 2020 LUDIP defines "protected" status solely by canopy density, reclassifying
184 inhabited zones through the "Abuloy" (Contribution) system. This fiscal arrangement serves as an institutional
185 middle ground; by collecting voluntary fees rather than formal rent, the university acknowledges the community's
186 permanence so as to avoid the legal difficulties of tenancy. Within this system, the Self-Build Unit Regulatory
187 Committee (SBURC) is tasked with monitoring and approving minor construction—specifically repairs and
188 renovations—to prevent further forest encroachment. However, the natural obstacle of overseeing such a porous
189 landscape has led to considerable environmental degradation. Blocked waterways and silted streams now cause
190 frequent flooding in low-lying sectors, while trash accumulation and slope erosion remain outside the reach of
191 institutional oversight.

192 Adding to these formal structures is a vital layer of grassroots spatial governance. Drawing on their identity as
193 "forest rangers", residents fill management gaps through direct interventions, such as installing makeshift barricades
194 to prevent unauthorized parking. By shielding saplings from soil compaction and vehicle damage, the community
195 asserts a direct, lived stewardship that often proves more responsive than top-down monitoring. This result points to
196 a fundamental tension: while the university governs the Arboretum through legal decree and fiscal compromise, the
197 community sustains its habitat's future through a sustained, custodial presence.

198 From the perspective of academic and biodiversity stakeholders, the Arboretum is characterized as a deteriorating
199 laboratory, a condition directly attributed to the 2020 LUDIP policy shift. This plan reclassified the site from a
200 "Protected Forest Area" to an "Academic Support Zone" to facilitate large-scale projects like the PGH-Diliman, a
201 transition enacted without consultation with biodiversity experts. This institutional change has replaced the once-
202 accessible "living laboratory" with physical barriers and prohibitive permit requirements, alienating the very faculty
203 and students it is meant to serve.

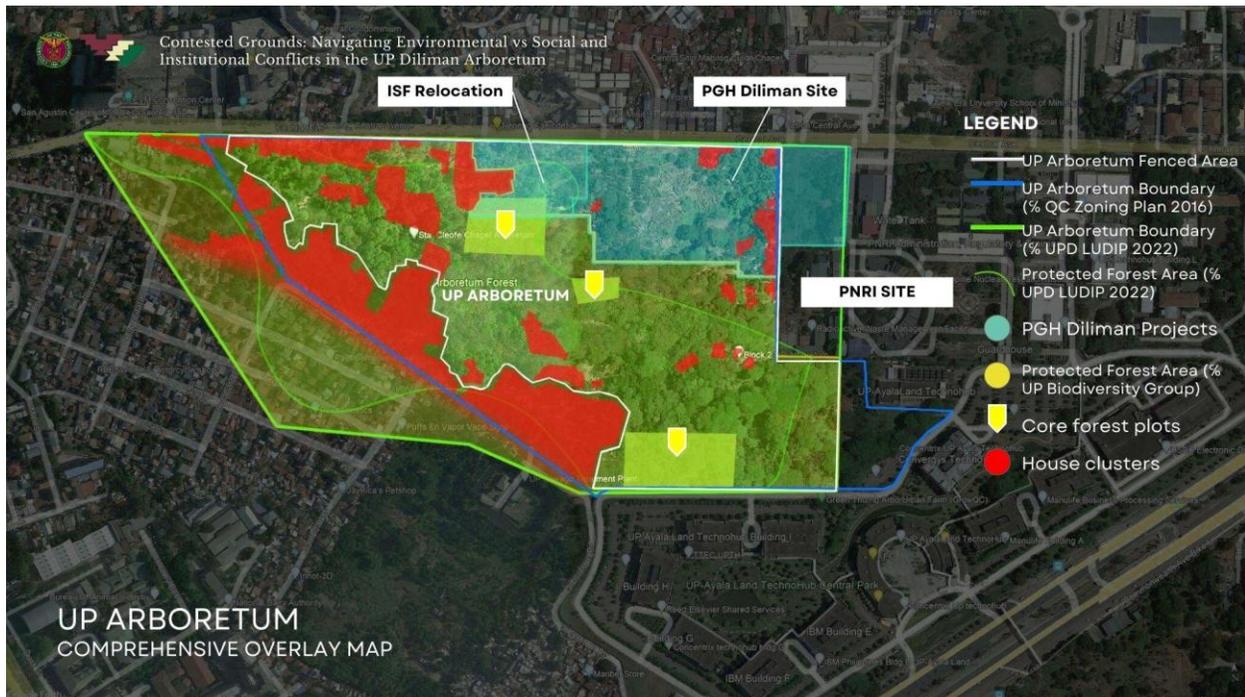
204 Furthermore, as the Quezon City LGU acts as a silent beneficiary—outsourcing its social housing obligations to
205 university land—the Arboretum encounters increasing ecosystem strains from invasive and unregulated species that
206 hinder natural regeneration. Ultimately, the absence of an integrated management plan and a formal assessment of
207 human carrying capacity leaves the Arboretum's ecological and research future increasingly precarious.

208 **C. Document Review**

209 The research findings indicate that the University of the Philippines' master development planning should be
210 grounded in environmentally sustainable and risk-sensitive design principles. This approach ensures that
211 infrastructure and landscapes remain resilient, ecologically balanced, and responsive to community needs. A central
212 principle is the protection and enhancement of wildlife, particularly within designated protected zones such as the
213 UP Arboretum. Although the Arboretum's designation as a natural urban space was lifted in 2020 to accommodate
214 the PGH project, biodiversity conservation remains a priority, as reinforced by the Biodiversity Management
215 Handbook (University of the Philippines Diliman, 2020), which provides guidelines for managing protected areas
216 and open spaces. The findings also present the importance of social responsibility, requiring sensitivity to national
217 and community needs, including the relocation of informal settlements in accordance with the university's Land Use
218 Plan to prevent marginalization. The planning process should be consultative, grounded in a shared vision and a
219 development framework developed with key stakeholders to ensure inclusivity and institutional identity. Land use
220 guidelines emphasize the preservation of non-build zones, which must remain undeveloped to serve as ecological
221 and social buffers, with adjacent building layouts designed to frame rather than obstruct open spaces. In summary,
222 campus development should integrate strategies to preserve and enhance natural ecosystems, maintain harmony
223 between built environments and landscapes, and establish the university as a model of ecological stewardship and
224 socially responsible growth.

225 **D. Physical and Boundary Maps**

226 Land-use classifications further complicate the Arboretum's future. The 2016 Land Use and Zoning Map prepared
227 by the Local Government Unit (LGU) placed the Arboretum within the Parks and Recreation Zone. However, on
228 October 29, 2020, the UP Board of Regents reclassified 9.5 hectares of the Arboretum's total 18.25 hectares from
229 "protected forest area" to "academic support zone." Of this reclassified land, 4.2 hectares were designated for the
230 proposed Philippine General Hospital (PGH) Diliman Complex, while the remainder was allocated for the expansion
231 of commercialized UP-Technohub establishments under a public-private partnership framework. This
232 reclassification, which proceeded despite significant opposition, raises pressing concerns about the long-term
233 sustainability of the Arboretum as a natural forest reserve.



234

235 Further analysis reveals inconsistencies in the documented size of the Arboretum. The 2012 UP Land Use Plan
 236 reported the area as 18.25 hectares, while the 2016 Quezon City Zoning Ordinance recorded only 16 hectares.
 237 Earlier planning documents, including the 1994 UP Land Use Plan, also cited 16 hectares. These discrepancies
 238 highlight the urgent need for UP to consolidate and verify supporting documents to establish the Arboretum's
 239 definitive boundaries, as current maps fail to clearly resolve its actual extent.

240 According to the study of Dovey and Recio (2024), the UP Arboretum settlement can be divided into four distinct
 241 clusters. Settlement in the Arboretum began in the 1960s and has expanded steadily over the past two decades. In an
 242 effort to curb further encroachment, a chain-link fence was installed around portions of the area (Figure 5.).



243

244

245 The first cluster is the primary settlement, characterized by low- to medium-density housing of poor durability and
 246 highly informal infrastructure. Situated on low-lying land, parts of this area are prone to flooding. An open
 247 basketball court has also been constructed within this cluster.

248 The second cluster lies along the northern edge of Central Avenue, where tricycle terminals are concentrated. This
 249 strip also hosts small shops and makeshift structures, including ladders.

250 The third cluster resembles the second in form but incorporates semi-formal university staff housing. These
 251 residences are enclosed within larger compounds, featuring fences, parking spaces, and gated access. This cluster
 252 has been identified as a potential site for displacement due to the proposed hospital project. Although clearing
 253 activities had begun, as of June 2023 no agreement had been finalized between the University of the Philippines and
 254 the Quezon City government, leaving the hospital plan unimplemented.

255 The fourth cluster, located in the southeast, consists of a small, low-density encampment with notable informal
 256 agricultural activity.

257 **E. Transect Walk**

258 Findings from the transect walk highlight a fractured landscape characterized by contrasting socio-environmental
 259 states. The initial path was adjusted based on constraints and input from the OCR and a community representative to
 260 ensure the inclusion of high-value sites: natural water springs, the relocation housing area, and informal agricultural
 261 plots. These plots, including vegetable gardens, though introduced into the natural landscape, are primary indicators
 262 of settlement, reflecting how the community has modified the environment to support their daily needs. Such
 263 landmarks are central to understanding the current state and the precarious future of the Arboretum (Figure 6).



264

265 These observations highlighted the physical impact of the 'walled' boundary between UP Diliman and the informal
 266 community—a visible marker of land dispute separating maintained university spaces from the precarious living
 267 conditions within the Arboretum. In these zones, researchers identified significant environmental degradation within
 268 forested patches and water bodies, noting a jarring transition where introduced landscaping encroaches upon the
 269 natural landscape. This ecological strain is further compounded by the prevalence of informal structures and a lack
 270 of formal infrastructure, which stand in direct contrast to the nearby relocation site and continue to constrain the
 271 community's daily life.

272 With this walk, a transect map was developed that reflects the documented spatial dialogues. By superimposing the
 273 traversed path onto the site map, this visual tool illustrates the complex relationship between the physical geography
 274 of the area and its socio-spatial conditions. This provides a bird's-eye view of how the traversed route intersects with
 275 the natural landscape, contested boundaries, and various community interventions (Figure 7).

276 This transect walk facilitated a series of dialogues with community members, whose active contribution of
 277 narratives and local knowledge allowed the researchers to identify critical environmental features that directly
 278 support the research objectives. Through this process, the research team was able to synthesize local knowledge with
 279 scientific observation, as community perspectives provided refined insights into seasonal changes, resource use, and
 280 historical landscape shifts that might not be instantly evident through observation alone. Consequently, the transect
 281 walk served as both a technical tool for spatial analysis and a cooperative model that validated and enriched the
 282 research findings. This collaborative approach not only strengthened trust between researchers and residents but also
 283 supported a framework for inclusive development and sustainable landscape management within the Arboretum.

284



285

286 The results show that the UP Arboretum operates as a contested space where biodiversity safeguarding, social
 287 realities, and administrative objectives intersect, commonly causing tension. Observations throughout the Arboretum
 288 show clear forms of spatial conflict: forest edges are encroached upon by informal settlements, pathways and
 289 clearings are altered by human movement, and institutional boundaries are reinforced through fencing and signage
 290 that restrict access. These spatial dynamics illustrate the ongoing issue of harmonizing ecosystem health with social
 291 and institutional demands. The Arboretum operates as both a biodiversity refuge and a critical green space for Metro
 292 Manila, underscoring its environmental significance. At the same time, it provides livelihood opportunities for
 293 excluded communities and represents a potential site for university expansion, representing larger socio-economic
 294 and institutional pressures. The interaction of these competing interests results in observable environmental
 295 consequences, such as habitat fragmentation, reduced ecological corridors, and increased human disturbance. This
 296 contested landscape serves as an example of the continual negotiation among environmental objectives, social
 297 justice considerations, and institutional imperatives, positioning the Arboretum as a representative case of urban
 298 ecological conflict in the Philippines. These observations confirm the need for integrative governance and
 299 participatory approaches that coordinate ecological sustainability with human and institutional needs, ensuring that
 300 the Arboretum remains both a center of biodiversity and a model for addressing the challenges of urban
 301 environmental management.

302 **F. Power-Interest Matrix**

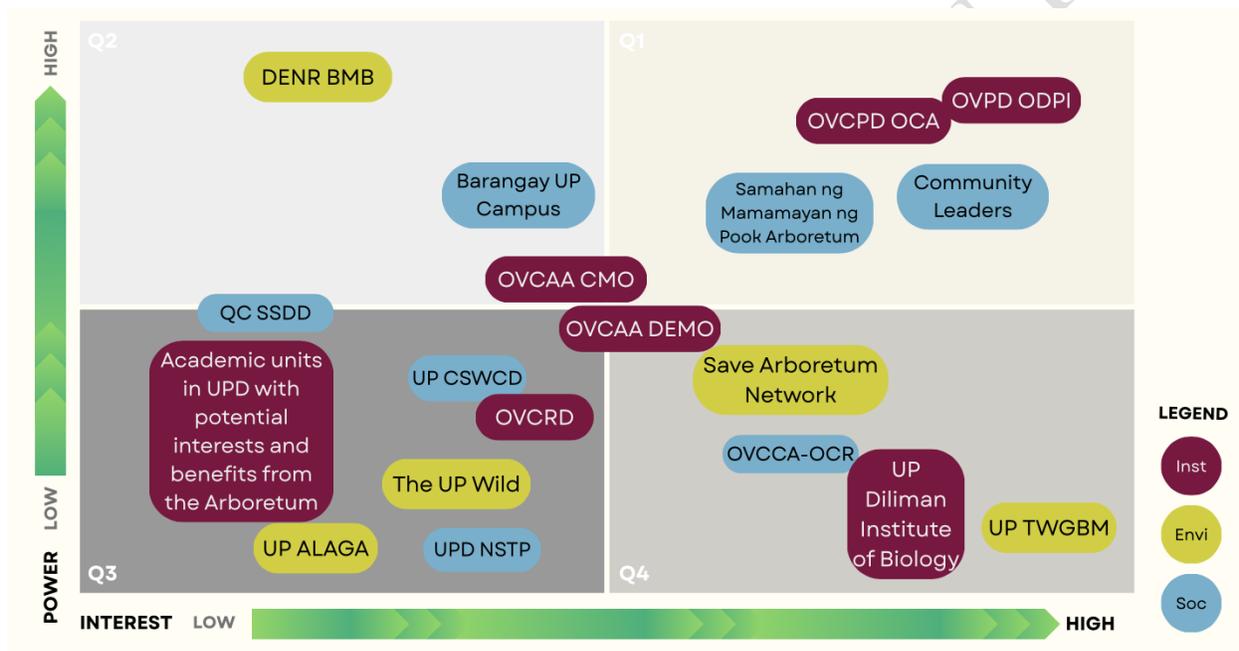
303 Power functions as a catalyst for change. It operates autonomously when it generates the transformations in which it
 304 participates, but it is also constrained when competing forms of power influence those transformations. Thus, power
 305 is not inherently productive; rather, it emerges through confrontation and interaction with other powers (Berndtson,
 306 1970). In this study, power is analyzed through observable actions and material expressions of intent, specifically
 307 acts that seek to enforce or resist change within the Arboretum. While such expressions do not always result in
 308 tangible outcomes, they remain significant as long as they are perceived, experienced, and invoked by stakeholders
 309 who participate in these power relations.

310 Participation in these dynamics necessarily introduces the coexisting factor of interest. Benditt (1975) distinguishes
 311 between subjective interests, which include feelings, attitudes, shared orientations, claims, demands, and wants, and
 312 objective interests, which are less influenced by emotion and instead refer to conditions or changes that advantage or
 313 disadvantage actors, serve as means to satisfy wants, or contribute to well-being. This framework offers a lens

314 through which the articulation of intent and the exercise of power are understood as inseparable from the interests
315 that motivate them.

316 The power-interest analysis in this study is based on data collected from 2012 to the present, with particular
317 emphasis on literature that legitimized the Arboretum as a campus domain (e.g., *UP Diliman Land Use Plan 2012*).
318 Historical narratives that continue to shape current behaviors and physical conditions are also considered.

319 The findings indicate a significant imbalance in power distribution (Figure 8.). The environment, despite being
320 central to the Arboretum's existence, is the stakeholder with the least influence. This marginalization stems from the
321 limited number of organized groups and advocates representing ecological interests, resulting in their
322 underrepresentation in decision-making. In contrast, institutional governance, represented by planners and
323 developers, holds the greatest authority. Their control over land use, policy, and development places them at the top
324 of the power matrix, frequently overshadowing ecological priorities. The community, consisting of leaders and
325 grassroots initiative groups residing within the Arboretum, possesses nearly equal power. Their proximity and lived
326 experience give them substantial interest and some influence, though their agency is constrained by institutional



327 structures.

328

329

330 While institutional governance holds formal authority, the Samahan ng Mamamayan ng Pook Arboretum (SMPA)
331 functions as a 'key player' possessing high power that rivals these structures. This influence is not merely a product
332 of proximity, but of a strategic transition from a precarious group to a formalized political actor. By registering as an
333 organization in 2013 and leveraging their status within Barangay UP Campus, the community gained the
334 institutional recognition necessary to stall large-scale developments like the UP-PGH project. Furthermore, their
335 power is rooted in a narrative of historical stewardship, they assert a "moral ownership" that transforms their
336 occupancy into a form of institutional entitlement. Thus, despite their legal precarity, their organizational unity and
337 historical legacy provide them with significant disruptive and negotiating leverage.

338 This distribution highlights a critical tension: although governance and community voices are relatively balanced in
339 terms of power, the environment remains persistently marginalized. The matrix demonstrates the urgent need for
340 mechanisms to enhance ecological representation, ensuring that institutional agendas do not compromise the
341 Arboretum's long-term sustainability.

342 **Conclusion and Recommendation:-**

343 The spatial conflicts within the UP Arboretum illustrate a complex, multi-layered landscape shaped by historical
344 legacies, evolving values, and contested power dynamics. Horizontal tensions among communities and vertical
345 struggles between institutions and grassroots actors are deeply embedded in the Arboretum's history, yet are
346 continually redefined by changing needs, perspectives, and governance structures. This study identifies a diverse
347 array of stakeholders involved in the Arboretum's governance, use, and conservation, emphasizing that
348 responsibility for its protection is shared rather than monopolized by any single group, and that stewardship burdens
349 are distributed across multiple actors.

350 The distribution of power and interests among stakeholders is evident in diverse expressions of authority and
351 resistance, from formal institutional actions to routine negotiations and assertions. Notably, enduring presence does
352 not necessarily correspond to influence; incremental, seemingly minor actions can collectively shape the
353 Arboretum's trajectory. These dynamics demonstrate that spatial tensions are articulated not only through physical
354 structures but also through behaviors, practices, and sustained community narratives and engagement.

355 Beyond the specific context of the UP Diliman Arboretum, this case highlights a critical flaw in traditional urban
356 ecological governance. It argues that managing contested urban green spaces cannot rely solely on formal
357 institutional authority and legal land titles. Instead, sustainable urban governance must transition from exclusionary,
358 top-down frameworks toward inclusive models that formally integrate the informal stewardship and historical place-
359 attachment of local communities, ensuring that ecological preservation does not come at the cost of social equity.

360 Analysis of these tensions indicates that environmental impacts are relative and depend on the interactions among
361 institutional roles, community agency, and intersectional factors. The Arboretum emerges as a contested yet resilient
362 space in which governance, conservation, and use are continually negotiated. By contextualizing these conflicts
363 within broader frameworks of power and participation, this study demonstrates that the Arboretum's future relies on
364 acknowledging diverse perspectives and the complex negotiations that shape its evolving landscape.

366 **Acknowledgement:-**

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368 and shared their insights through interviews. Their contributions were invaluable in shaping the depth and direction
369 of the research. The researchers also sincerely thank the community for their encouragement and cooperation, which
370 played a vital role in making the paper a success.

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