

# Reclaiming Social Equity in Land Use Planning for Sustainable Cities

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## Abstract

The rapid growth of Philippine cities has brought a host of problems and challenges, including sprawl, environmental degradation, unemployment, lack of adequate housing, increased vulnerability to hazards, and an overall decline in the quality of life of urban residents. As Mega Manila expands, its peri-urban fringes face the pressure of conversion to urban land uses, while core urban areas grapple with various urban issues on zoning and land use change. Given these issues, land use plans and policies serve as important sites of intervention in moving toward urban sustainability. Beyond issues of enforcement on the ground, this paper argues for the need to examine, evaluate, and refine the guiding framework for land use planning.

We propose three ways of approaching urban land use planning and policy based on a review of relevant documents and field research in two case study sites. First, we emphasize the need to broaden sustainability as a guiding framework for land use planning by emphasizing social equity and justice as a crucial component of sustainable development. Considering these may promote community interests that do not necessarily fit within an economic growth or ecological integrity imperative. Second, we advocate building on efforts to improve community participation in land use planning. Our field accounts suggest opportunities for further participation of

**Keywords:** land use, sustainability, urbanization, spatial practices

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communities in crafting land use plans and related projects. Third, we suggest including other spatial approaches and imaginaries practiced by local communities in everyday life. We identify the merits of a deeper engagement with communities and use the example of community mapping as a tool for planning land use. Increasing community participation and incorporating other planning methods will contribute to better realizing social equity in planning for just sustainability in cities.

## **Introduction**

The rapid growth of Philippine cities has brought a host of problems and challenges including sprawl, environmental degradation, unemployment, lack of adequate housing, increased vulnerability to hazards, and an overall decline in the quality of life for urban residents. These problems are often attributed to poor planning, regulation, and governance of urban processes, which often magnify inequality and undermine urban sustainability. As Mega Manila expands, its peri-urban fringes face the pressure of conversion to urban land uses while core urban areas grapple with emergent forms of land use transformations. Land use plans and policies remain important sites of intervention to address urban challenges and move toward urban sustainability. However, beyond issues of enforcement on the ground, we argue for the need to examine, evaluate, and refine the guiding framework for land use planning. Despite their limitations, sustainability and sustainable development continue to be a relevant and appropriate framework for urban governance.

Our goal in this paper is to contribute to urban land use planning and policy in three ways. First, we emphasize the need to broaden sustainability as a guiding framework for land use planning practice and policy beyond current iterations. We call for stronger incorporation of the social equity and justice component of sustainable development as a way to safeguard and promote community interests that do not fit within an economic growth or ecological protection imperative. Second, we seek to build on efforts to strengthen community participation as an important component of land use planning. Third, we suggest extending land use planning methods to include other spatial approaches and imaginaries practiced by communities in everyday life. We identify the merits of a deeper engagement with communities and use the example of community mapping as a tool for planning land use. Increasing community participation in land use planning process and incorporating other planning methods will contribute to better realizing social equity in planning for just sustainability in cities.

In the next section, we begin by reviewing how sustainability becomes implicated in urban management and governance before taking the case of urban land use planning process in the Philippines. We present empirical material from two case study sites which were chosen because they present different dynamics of urban growth and land use (figure 1). Calamba, located on the peri-urban fringes of Mega Manila, has witnessed conversion of agricultural land to commercial, industrial, residential, and tourism-oriented land uses. Caloocan, located in Mega Manila's urban core, is characterized by high-density industrial, commercial, and residential land uses in its southern district while residential and vacant land uses dominate its less-dense northern section. Whereas the lakeside barangays of Calamba experience land use change tied to expansion of Mega Manila, the informal settlement communities of Caloocan face issues of

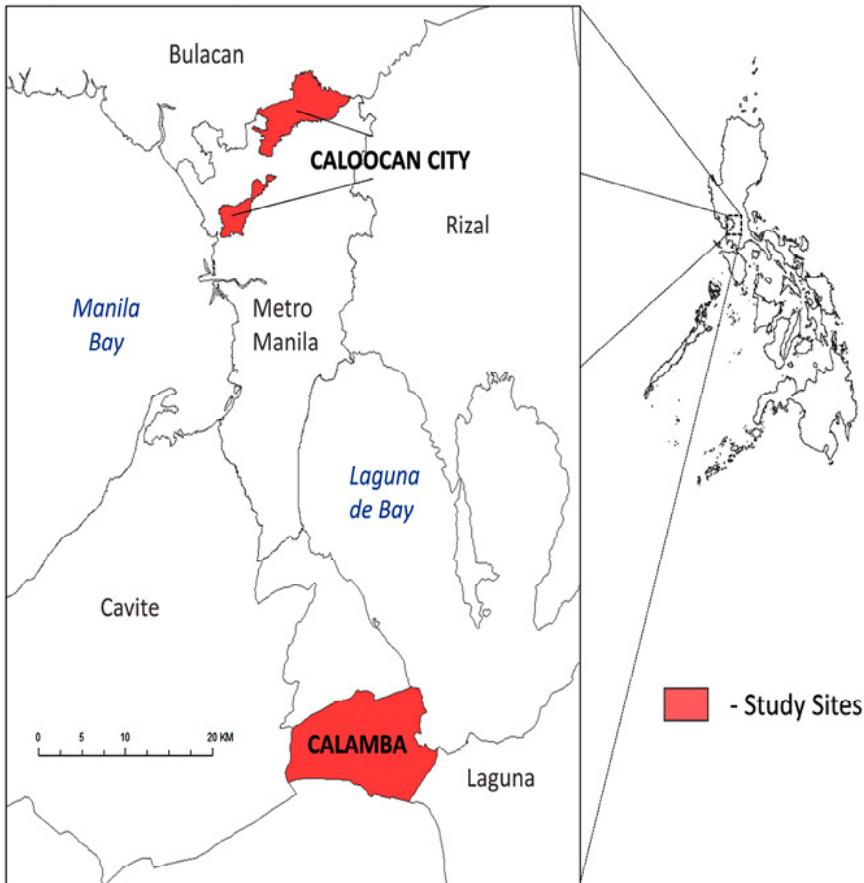


Figure 1. Case study sites

land tenure insecurity, poor access to social services, and threats of eviction. By focusing on a peri-urban fishing community in Calamba and settlements with conflicting land ownership claims in Caloocan, we wish to highlight aspects of land use change often overlooked or ignored in discussions of urban planning and sustainability. We do not seek to generalize for Philippine cities or to undertake a thorough review of the land use planning process in the Philippines. Rather, we use the two case studies to focus on specific issues that can cast light on the strengths and limitations of land use planning at the national and local levels.

We collected national and local policies and plans related to land use, including proposed bills in Congress and various land use documents and regional master plans from national government agencies (e.g., Housing and Land Use Regulatory Board [HLURB] Guidelines for Comprehensive Land Use Planning [2001], a more expanded version in its revised 2006 Guidebook, and the National Framework for Physical Planning 2001-2030 [NFPP]). We examined the Comprehensive Land Use Plans (CLUPs) and relevant zoning ordinances of our two case cities. In our analysis, we parsed the patterns of meanings that underlie these documents and identify strategic shifts in language in relation to sustainability, sustainable development, equity and participation. Between August and December 2015, we undertook fieldwork in four barangays of Calamba and Caloocan, conducting twenty-five interviews with thirty-six barangay officials, homeowner association officials, and residents engaged in various livelihood activities. In Calamba, we talked to fisherfolk, fish vendors, farmers, and others who depend on nearby Laguna Lake, as well as those engaged in the hot spring resort economy. In Caloocan, we interviewed residents and neighborhood associations in barangays with pressing housing and land tenure issues. In both case studies, the questions we posed involved everyday livelihood activities, patterns of mobility, place histories and narratives, and perceptions about land use issues. While we also talked to local planning officers, our intention during fieldwork was to bring out community perceptions and activities in relation to land use within and beyond the formal planning process.

We collected spatial data produced by the government, including zoning maps, and conducted community mapping exercises to identify overlaps and divergence between spatial practices and visions of communities with official land use maps. The goal of the mapping activities was threefold. First, we saw mapping as a way to elicit narratives about the lived spaces of communities that may complement or conflict with official government narratives and maps. Second, the process of mapping enabled residents to understand the spatialities

of government projects and plans, a process that improved community engagement with state plans. Third, the mapping activity provided a venue for residents to recall past events, discuss current issues, and envision alternative community futures. We printed satellite images of our field sites, which were laid over or placed next to images of official land use maps and shown to participants. Participants



**Figure 2. Community mapping exercise in Calamba City**

were asked to point and draw on these maps the places of most relevance to them, and to note and recall historical changes in these places. This was done both with the fisherfolk in Calamba and the residents and homeowner association officers in Caloocan. In both cases, our participants were selected through snowball sampling, starting from the informal networks of barangay officials and local community organizers.

### **Defining Sustainability in Urban Governance and Land Use Planning**

With the increasing rate and complexity of urbanization and associated environmental transformations, sustainability and sustainable development have emerged as key concepts in urban governance (Seto, Sanchez-Rodriguez, and Fragkias 2010; Bulkeley and Betsill 2005; Biermann and Pattberg 2008). Despite the slipperiness and contentions surrounding both terms (Sneddon 2000; Mansfield 2009; Marcuse 1998; Campbell 2013), they have been applied widely as guiding policy framework for the development of urban futures (Hopwood, Mellor, and O'Brien 2005; Jordan 2008). Goal 11 of the United Nations Sustainable Development Goals, for example, aims to make cities inclusive, safe, resilient, and sustainable. Sustainability applied to cities seeks to address the tripartite concern in sustainable development for ecological integrity, economic growth, and social

equity (Campbell 1996). Sustainable cities may then be defined as urban areas that are simultaneously green, growing, and just.

Land use planning is a key component of sustainability transitions in cities (Owens and Cowell 2002). For example, in the context of climate change mitigation, a compact urban form contributes to energy efficiency that decreases carbon emissions (Bulkeley 2010; Lebel et al. 2007). Land use planning also plays an important role in reducing vulnerability and increasing resilience of cities as part of their climate change adaptation measures (Jabareen 2013; Godschalk 2003; Nolon 2006; Frazier, Wood, and Yarnal 2010). However, while often acknowledged, land use planning's explicit links with its role in addressing the concerns of marginalized and poorer sectors of the population remain relatively understudied.

Scholars have noted constraints in operationalizing sustainability in policy. The three components are not addressed equally, with issues of equity being the most difficult to define and develop (Pearsall and Pierce 2010; Campbell 2013; Agyeman, Bullard, and Evans 2003). While the green and growth components are often prioritized in policy-making, efforts to plan for sustainable cities fall short in the third criterion of equity. Equity in sustainable development may include several principles, such as futurity or intergenerational equity, social justice or intragenerational equity, and procedural equity or fair treatment of people (Hopwood, Mellor, and O'Brien 2005). In this paper, we will focus on social justice or intragenerational equity and procedural equity to highlight those usually left out in sustainability discourses in land use planning and to consider ways to build greater community participation.

Building on these observations, we argue that issues of social equity and justice can be better articulated and emphasized by expanding the suite of land use planning methods, and by improving the degree of participation of communities in land use planning processes. The recent move toward sustainable development and greater community participation beginning in the 1990s has presented opportunities for foregrounding issues of social and environmental justice. While sustainable development is often defined in the context of intergenerational equity or sustainability for future generations, it also enables discussion of other principles of equity such as intragenerational equity or contemporary social justice and procedural equity or meaningful involvement of people (Agyeman and Evans 2003; Haughton 1999). A focus on social justice maps uneven development and uneven distribution of benefits and access, as well as costs and harms, within society. More importantly, it seeks to examine the underlying, systemic cause of such patterns beyond concerns for redistribution (Haughton 1999). Sustainable

development with a clear social justice orientation can therefore promote transformative change (Hopwood, Mellor, and O'Brien 2005) by targeting the systemic roots of inequality while also opening up avenues for procedural equity through greater participation of people in decision making. In the context of land use planning, this task requires examining the underlying philosophy or framework that guides state policies and practices.

The politics of conflicts and contestations in meanings and definitions of sustainability and sustainable development in policy have repercussions for on-the-ground realities that shape urban land use (Sneddon, Howarth, and Norgaard 2006). How these differing ideas about sustainability play out in the land use policy and planning arenas deserve further attention (Owens and Cowell 2002; Godschalk 2003; Campbell 1996). Authors like Watson (2009a, 2009b) also suggest that planning frameworks need to be sensitive to the dynamics of urbanization in countries like the Philippines, which is driven mostly by rural-urban migration and great inequalities between and within cities. Planning paradigms, based on a modernist or Cartesian ethos that tends to lean toward utilitarian views of space and preference for the formal economy, are often poorly suited to address problems that result from cycles of urban informality (Watson 2009a, 2009b; Roy 2005, 2009). Resolving conflicting demands for space in rapidly growing cities requires planners and policymakers to pay better attention to the lived realities of people in place - that is, to the multiple informal institutions, political economies, and social networks by which people negotiate their lives (Watson 2009a, 2009b). A view of space that is relational and multiply-produced (Massey 2005) provides an alternative way of promoting sustainability and equity in land use planning that is sensitive to the complexities of urban development. In other words, there is a need for urban planning that addresses the particularities of cities and their inhabitants. By contrast, planning methods and strategies uncritically adopted from best practices elsewhere tend to be incompatible with the "fragile, fluid, improvised and temporary practices needed to survive" in the cities of the global South (Watson 2009a, 187). We therefore see the need to include other methods that may better capture these dynamics.

Current land use planning practice relies on consultants gathering data through rapid appraisals, sieve analysis using a few spatial layers, and collection of secondary data available to the planner. The scale and the historical and qualitative depth of data used to make planning decisions tend to be constrained by the planning practice's short timeline and limited resources, as well as the realities of dealing with political interests and bureaucratic processes at the local government level. However, ethnographic approaches could complement traditional planning

methods by taking into account the social complexity embedded in environmental (and urban land use) change (Fabinyi, Knudsen, and Segi 2010). Community mapping or counter-mapping exercises also enable other spatial imaginaries and ways of seeing land and resources from the perspective of communities (Peluso 1995; Hodgson and Schroeder 2002). These methods are time-consuming and are not without their limitations, but they do enable a holistic understanding of local issues. Community mapping also improves the participation of communities by increasing awareness of local processes and projects, and engaging residents in collective decision-making and planning for their future.

### **Sustainability, Social Equity, and Participation in Land Use Planning in the Philippines**

Serote's book (2004) has provided a comprehensive review of the land use planning process in the Philippines (see chapters 3 and 4). For this section, we read instead government policies and frameworks on land use planning for themes of sustainability and sustainable development, particularly on issues relating to land use conflicts, social equity, and participation. The aim is to identify discourses and philosophies that underpin—explicitly or otherwise—the formulation and implementation of land use plans.

Sustainable development and social equity figure prominently in the stated vision of national development in the National Framework for Physical Planning or NFPP. The vision embodies the intergenerational meaning of sustainable development that emphasizes future generations benefiting from sustainable use of resources at the present. The different principles that underpin the national vision range from promoting food security, ecological integrity, and equitable resource access to encouraging public-private partnership and recognizing market interplay with ecological and intergenerational aspects of sustainable development. Less articulated in the NFPP is the philosophy of dealing with conflicting elements of these principles or components. The encompassing and rather vague use of the term “sustainable development” in the document allows it to bypass potentially conflicting policy strategies and to prioritize economic growth—often market-led—as the primary driving force of planning.

The UN Sustainable Development Goal on urban sustainability explicitly refers to the role of participatory planning toward inclusive and sustainable urbanization. Ensuring authentic participation from all stakeholders during the planning process is a key step in moving toward sustainable cities that are also equitable and just. In the Philippine context, consultation and participatory planning is facilitated mostly through intermediaries such as nongovernment

organizations, civil society organizations, people's organizations, and other political and sector-specific movements. In principle, these groups represent the respective communities they serve, and voice out their concerns, especially during interfaces with the government. Civil society movements in the Philippines are vibrant and have shown considerable influence in policy making (Gera 2016). However, as argued by Cariño and Corpuz (2009), participation of NGOs and other organizations is often "perfunctory" or subsumed within certain "vested interests." Their contribution to planning is little and tends to be limited to seeking support for specific projects.

In its 1987 Constitution, the Philippine government explicitly stated its responsibility to promote distributive justice for the common good:

The use of property bears a social function and all economic agents shall contribute to the common good. Individuals and private groups, including corporations, cooperatives, and similar collective organizations, shall have the right to own, establish and operate economic enterprises, subject to the duty of the State to promote distributive justice and to intervene when the common good so demands. (Article XII, Section 6).

Adhering to this responsibility, Philippine legislation does not fall short in providing a strong institutional framework in the context of public participation and decision-making. The 1987 Constitution recognizes the right of people's organizations to "effective and reasonable participation at all levels of social, political, and economic decision-making," and the responsibility of the State to "facilitate the establishment of adequate consultation mechanisms" with these organizations (Article XIII, Section 15-16).

In theory, development plans by the State are to be formed at the local level and are consulted with all key stakeholders. In the Local Government Code of 1991 (Republic Act 7160), mechanisms for the active participation of civil society groups are prescribed at the local planning level. It calls for the formation of Local Development Councils, which shall have significant representation from NGOs. The LDCs craft Comprehensive Land Use Plans for their respective cities and municipalities, which serve as blueprints for the sustainable use of land resources, and the basis of local zoning ordinances to guide future developments in their jurisdiction. In line with the bottom-up approach to planning, the Local Government Code of 1991 also tasks barangay development councils to prepare barangay development plans, which may be integrated into city and municipal plans.

Despite these provisions, Gera (2016) described multiple challenges and constraints in generating public participation in planning, especially in the context of the Philippine political system. For instance, CLUPs, which supposedly result from multi-stakeholder consultations, are rendered irrelevant when zoning ordinances are passed before they are actually finalized. Furthermore, CLUPs in several local governments are mere “mirror images of one another” (Navarro 2014, 13) as various parts of the plan are unclear and tend to mimic plans of other cities and municipalities. The limited financial capacity and the time-consuming process of consultations amid a fast changing urban landscape may lead local government units to hasten passage of plans and ordinances without fully engaging in participative processes. Local planning also tends to prioritize programs that align with key local government officials whose terms only last for three years, illustrating tensions between technocrats and politicians in the development of land use plans (Serote 2004; Navarro 2014). Well-meaning organizations find themselves stuck in the politics of engagement with the government, undermining their capacity to represent their respective interests, and emphasizing the dominant role of the state in such consultations. Furthermore, planning in several local governments have focused on “piece-meal zoning” and conversion of land (Navarro 2014, 13). Despite having institutional backing at the legislative level, there are still many challenges that need to be overcome to achieve meaningful participation in land use planning for sustainable cities. The normative promise of participatory governance is to transform existing asymmetries in decision-making through the active involvement of participants, and not just to provide an instrumentalist or managerial tool for implementation (Blackstock et al. 2015).

The institutional and practical limitations of current land use planning should push us to consider various ways of building stronger participatory urban governance. Improving our understanding of local context and issues that involve communities is a necessary intervention despite the challenges that such an undertaking requires. This is especially important given the state’s responsibility to secure social welfare through a tricky balancing act between conflicting interests (Serote 2004). Thus, relations of power need to be acknowledged and identified while recognizing voices and interests at the social margins—two key elements highlighted by casting attention to intragenerational equity or social justice.

The problem of dealing with conflicting elements of sustainable development can also be seen in other national planning documents. A key starting point portrays land as a scarce resource owing to the pressures posed by an expanding

population and growing cities due to rural to urban migration (HLURB 2006). Urban expansion consequently requires more judicious use of land through zoning for commercial, industrial, or agrarian purposes. Local governments are seen as functioning to meet rising demand for land through “strategic planning” despite an admittedly limited supply of financing to address gaps between planning and implementation (HLURB 2001). While commercial development in the form of malls or central business districts is increasingly perceived as pivotal to sustained economic growth, it is also regarded as potentially problematic in its side effects (i.e., traffic, pollution, migration pulls), while land use for agriculture and industrial manufacturing are prioritized in regional development plans in a kind of growth-first model for rapidly developing metropolises. This emphasis on economic growth emerges more pointedly in land use conflicts.

Potential land use conflicts between various claimants are to be resolved through provisions for consultation mechanisms conducted with potentially impacted communities—only one among a differentiated set of stakeholders which includes the private sector. Consultations should provide for the dissemination of important information, while giving communities reasonable time to review, comment on, or reject proposals through public hearings. Consultation then becomes the primary mechanism for community participation in land use governance. The role of community consultations in the land use planning process is to ensure that a system of checks and balances is in place to ensure transparency and accountability at all stages of the approval process. However in the flurry of time-consuming exchanges between agencies and individuals, it is unclear whether the insights of communities are retained or taken into account in their original form. Community consultations are done prior to the review and approval process during which time all stakeholders involved are defined through bodies organized by the LGU and on terms set by the LGU in advance. There is also no provision for a civil society oversight body to mitigate against the possibility of losing sight of the related objective of maximizing community participation.

Crucially, the HLURB Guidebook provides for broadly defined “non-negotiables” during these consultations, which can be a bit of a non-starter:

These non-negotiable aspects shall be made clear at the beginning of the consultation. It is important to define what the consultation is about and what it is not about. For instance, the government may have already decided that a dumping site within a City/Municipality with significant number of informal settlers will be redeveloped for medium density housing. The purpose of the consultation process is not to seek feedback

on whether the community agrees with that decision, but rather to seek their views on issues that need to be addressed in the actual redevelopment of the area, as well as options for the development. (HLURB 2006, 128; emphasis in original)

At the community or barangay level, the results of land use consultation processes may take the form of comprehensive People's Plans generated through the facilitation of selected People's Organizations (PO) and neighborhood associations. No specific prescriptions or formats are required of People's Plans, except that they ought to contain a site development plan, including the homes of all PO members, and may include non-physical developments such as livelihood and training.

Similar contradictions are evident in the fact that while rights to adequate housing and security of tenure, justified through clear reference to social justice—a term ritually declared if vaguely defined—such rights take on a reactive tenor, evident only in the context of resistance to evictions and resettlement. For instance, a recent DILG Memorandum Circular (“CHR Advisory on the Right to Adequate Housing and Humane Treatment of Informal Settlers”) speaks of social justice, but only in the context of eviction, demolition, and resettlement of informal settlers. While describing the potential for “safe, affordable, decent, and humane relocation” through the people’s planning process, concrete guidelines for the latter are lacking. Justifications for eviction tend to be arbitrary, ranging from concerns over the safety of informal settlers living in danger zones to multiple claims by private individuals contesting land whose actual owners are unclear or which have for decades been understood by settlers to be government or public property. The majority of informal settlers do not have property titles, and for this reason security of tenure is a major political issue. In addition, mandatory consultations with communities prior to eviction have at times become pro forma affairs with promised resettlement areas located far from social services and sources of livelihood.

With the asymmetrical state emphasis on economic growth and the limited participation of communities in land use planning, operationalizing social justice becomes an even more contentious issue. Reducing the undue influence of powerful interests in the formulation of land use plans and major public infrastructure projects while ensuring genuine community participation, transparency, and accountability at all stages is but one small, if crucial, step in that direction. This is particularly significant where private interests may dominate the planning process over concerns for social welfare (Serote 2004). We argue that clearer frameworks for social justice in the context of the right to

adequate housing and meaningful public participation in land use planning can facilitate a more holistic approach to policy making for development in both urban and rural settings. Case studies in the next sections illustrate the need to emphasize social equity, improve participation and broaden methods in the land use planning process.

### **Calamba City: Infrastructure Projects, Livelihoods, and Land Use Change**

Calamba with a 2010 population of 389,377 is the largest city in Laguna. The city has emerged as a regional commercial, industrial, and administrative center, serving as a crucial node in the Calabarzon and Metro CALA urban-industrial projects. Despite rapid industrial and urban population growth, Calamba still hosts lands devoted to agricultural (20 % of total area), forest conservation, and tourism uses. The recent rapid growth and changing mosaic of land uses present challenges for local government planning. These broader dynamics, however, need to be placed in the context of the spatialities and histories of everyday lived geographies of city dwellers and communities dealing with urban transformations.

Located in the midst of Metro Manila's expanding peri-urban fringe, Calamba's land use changes and challenges link closely with developments in Metro Manila. This city-fringe connection is forged through explicit state policies that shape urban spatial development. The Canlubang Urban Development, for example, formed as a result of state thrusts to disperse industries away from Metro Manila. The Laguna Lakeshore Expressway Dike (LLEDP), showcased as the Aquino administration's largest private-public partnership project, is viewed as an infrastructural solution to ease flows from Metro Manila and flooding along the lake shoreline. The connections between policies and spatial development, on the one hand, and spatial development and effects on communities, on the other, deserve further attention.

Two land use plans guided local land use and development planning in Calamba: the 1980 and the 2000 Comprehensive Land Use Plans. The plans differed in approach, reflecting their temporal and institutional contexts. The 1980 plan embodied a threefold goal of conserving prime agricultural lands, controlling development in environmentally critical areas, and protecting the water quality of Laguna Lake. The goal was in the context then of emerging Calamba industrialization, which the conversion of the Canlubang Sugar Estate to an urban development zone initiated. Industrial land use became the dominant use in Calamba along with residential and commercial land uses. The primary

development thrust was to make Calamba the industrial center outside Metro Manila. The plan suggested a radial-circumferential urban pattern as a spatial strategy, and targeted industrial centers as a self-contained community with residential, commercial, and institutional land uses complementing industrial uses. Tourism was already a thriving activity in barangays with hot spring resorts. The plan wished to retain and develop these attractions.

The 2000 Comprehensive Land Use and Development Plan (CLUDP) was formulated by Urbis Philippines, Inc., a consultancy firm that also prepared the broader Metro CALA Land Management and Development Strategy for highly urbanizing and rapidly growing cities in Cavite and Laguna. This version of the plan deviated from the demand-driven and prescriptive approach of the 1980 CLUP to create flexibility and address future uncertainties amid rapid land use changes. The CLUDP authors acknowledged several limitations of the predetermination and fixed land use specifications of the earlier plan. They argued that these mechanisms may not necessarily ensure land use compatibility and may not properly direct urban growth. Urban fringe development in Calamba has been sporadic and uneven, driven by speculation and private interest decisions. Instead, they called for a policy-driven approach with an ecological framework that is “ecologically-based, growth oriented and emphasizes socially-responsible development” (Calamba 2000, 4-4). Regulating land use would also entail rolling back local government functions to being an enabler, facilitator, and regulator of land development as a means of recognizing the role that private sector serves in driving growth of the city. One thing to take note of would be the institutional context of the plan’s formulation during a decade that saw a move toward decentralization and state devolution of central state powers to local government.

The fifteen-year plan set an overall development goal for Calamba as a regional growth center with “a well-balanced economy focusing on trade and industry strengthening” while enhancing the agricultural and tourism sectors and promoting “people-centered growth” and sustainable development. The strategy is three-pronged, acknowledging the three dominant sectors in the city: industry, agriculture, and tourism. The plan expects tourism growth to continue although it promotes the need to make it more attractive to international tourists. Agriculture, a sector in decline owing to land conversion and other forms of agrarian transformations, is expected to remain important. The plan stressed the need to intensify and maintain high agricultural productivity through state support.

Industry is expected to continue to be the driving force of growth in the city. This industrial-led development thrust is supported and echoed by several regional and provincial plans formulated in the 1990s, including the Calabarzon Master Plan, Southern Tagalog Regional Development Plan and Provincial Physical Framework Plan. All plans acknowledge the need to support the shift from agriculture to industry and services through appropriate management and planning.

Within the city, the goal of increased mobility is also incorporated in the physical development strategy. The plan prefers a multipolar spatial structure for the city to spread growth out of congested centers. Several industrial estates, logistics, and service facilities have collocated in Calamba since the 1970s. This growth, however, has not been accompanied by corresponding investments in road infrastructure, leading to heavy traffic congestion. Although not included in the two land use plans, the national government sees the Laguna Lakeshore Expressway Dike Project as one of the infrastructural solutions to the problem of congestion in Calamba, the western Laguna industrial region, and the southern Metro Manila. The project also seeks to address recurrent flooding along the shoreline, which has become especially problematic since 2009.

The Calamba development framework seeks to play up the relationship between state, market, and civil society. The relative emphasis and importance to development of these three sectors, however, are asymmetrical. The framework highlights the market as the primary driver of growth. The task of the newly-empowered local government is to ensure that this private-sector led growth is “socially responsible” and would work with civil society in a “mutually beneficial manner” (Calamba 2000, 1-9). In order for this to succeed through a trickling down of benefits to communities, the plan pushes the state to formulate clear plans and policies, provide venues for regular dialogues between the two sectors, resemble the organizational efficiency of private sector corporations, and create a feedback and monitoring system.

However, the tripartite model is hinged on economic growth as the ultimate source of development. This adheres to an economic-centered view of sustainable development—one supported by the move toward market-oriented policies for land. The strategy of multipolar physical development suggests that land use changes will continue. The task of the local government is to ensure that these would not adversely impact both people and environment. We argue that the focus on economic growth while attempting to rein in its negative consequences will not adequately address issues of communities on the ground, specifically if their interests and needs do not match state or private sector visions of growth-oriented land use.

There is neither adequate discussion nor proper mechanism in the plan on how to address fundamental conflicts in land use and development. This becomes contemporarily relevant in the case of coastal barangays that will experience significant changes as a result of the spatial strategy that makes way for certain infrastructure projects. Based on the development strategy and plan objectives, communities will have no choice but to accept projects like the LLEDP because it will contribute to easing of congestion and improvement of accessibility of the city to Metro Manila, thereby increasing its attractiveness as an industrial and tourism center. The LLEDP, made priority at the national level, is one of the “non-negotiables” identified in the previous section. The best that the local government can provide in this context would be to ensure that mechanisms and safeguards are put in place to minimize or ameliorate harm to the communities. The root cause of the conflict, however, will not be addressed and there are no discussions of alternatives to the mega-infrastructure project beyond token participatory dialogues. There is therefore a limitation to sustainable development as an economic strategy even if it is couched in the language of “socially-responsible” growth that maintains “environmental integrity.”

The consultants described the Calamba CLUDP as a “product of an extensive consultation process” that involved primarily meetings with local government officials as members of the technical working group (Calamba 2000, 1-1). The extent of engagement with other sectors took the form of consultations with businesses and members of civic organizations. Structurally, there were no opportunities for specific communities to actively participate in forming their own development visions, land-use-related or otherwise, apart from representation by elected officials and through NGOs. In the case of Calamba, constraints to participation not only include the market-oriented focus of the land use plan but the structure of the land use planning process itself. This lack of active participation deepens the mismatch between state land use visions and community spatial practices.

We can observe the intersections of land use conflicts, state infrastructure projects, and local livelihoods in the Laguna Lake coastal communities of Calamba. Interviews and community mapping with community members brought out pressing concerns that reflect limited participation of the communities in matters pertaining to their land and livelihoods, especially when these pertain to “non-negotiable” state decisions such as the proposed LLEDP. A section of the dike is planned to be constructed several hundred meters off the shores of Calamba and nearby towns. While one resident we interviewed regarded the project as a marker of modernization for the community, most were opposed to it. One fisherfolk read

the LLEDP as the state's way of profiteering from the lake at their expense. The only benefit they see is temporary: being hired to work in the construction of the dike. For them, this benefit however is tempered by the possibility that the project will not hire locals and will exclude older fisherfolk.

Calamba fisherfolk anticipate potential negative impacts of the dike on their livelihoods and ecologies. The most severe impacts for them are decreased and obstructed access to fishing grounds, and intensified shoreline flooding. Fisherfolk fear that when the dike is constructed with its current design, they will have to spend more time and effort to get to the open waters of the lake where they fish. This poses a problem as most fisherfolk use oars and boats without motor engines. Flooding and the risk of structural failures are also major concerns. Fisherfolk explain that water from the uplands of Calamba eventually drain into the lake. For them, the proposed dike will obstruct water flow and cause accumulation of stormwater along the shore that will lead to floods as bad as or worse than those that submerged their community in 2009, 2012, and 2013. The infrastructure will also disrupt fish reproduction near the shore.

We conducted a community mapping exercise with Calamba fisherfolk to identify the places that they consider important and to map the activities (livelihood-related or otherwise) that they perform on a regular basis. The idea is to engage residents in the production of alternative spaces that are lived and grounded on everyday activities of people. The map produced through this process is not meant to be fixed nor definitive but aims to counter dominant representations about space divorced from processes on the ground.

The community mapping activity, supported by interviews, showed how the lake is very much alive and serves as a source of living for Calamba residents. Thus, any attempts to drastically change social and ecological conditions in the lake should be carefully considered and decision-making needs to actively involve and learn from local residents. The mapping activity illustrated the multiple spatialities that are often rendered invisible or simplified in official land use plans and cartographic representations. Bringing out these narratives enables us to pose questions regarding equity and justice, such as: who will benefit from these large-scale projects, and who will bear the burden?

The case of lakeshore Calamba illustrates the need to incorporate social equity and justice more explicitly in land use planning and practice. Concerns about livelihoods dependent on access to the lake and free from risk of future hazards are components of sustainability that may not necessarily coincide with the promise of economic growth (through industrial or infrastructural projects).

Sustainability here means that residents should continue to have the capability to earn a living out of their environment. An emphasis on social justice would suggest that this capability should not be undermined by state projects aimed at promoting economic growth for other actors. While other ways of engagement with such issues may be pursued, land use planning—with its inherently spatial and developmental orientation—remains an important space for discussion and dialogues about development futures.

### **Caloocan City: Informal Settlements, Ambiguous Tenure, and Land Use Plans**

Caloocan is the third most populous city in Metro Manila, divided into two sections that have different land use patterns, history, and characteristics of urbanization. North Caloocan land use is dominated by residential and vacant lands while South Caloocan is a mix of residential, industrial, and commercial. South Caloocan experienced rapid urbanization during the postwar decades, whereas North Caloocan's urban growth is relatively recent. For both sections of the city, land use change has seen a shift toward commercial, residential, and industrial land uses at the expense of vacant lands and agro-industrial uses.

Caloocan's CLUP aims for sustainability through an emphasis on economic growth mixed with ecological protection. The plan sees an orderly community and healthy environment as a result of an investor-friendly environment and public-private partnership (Caloocan 2003, 1-4). Caloocan affords interesting comparisons in the local government's differing treatment of the city's two halves, owing to recent transformations in policies governing land use on one hand, and historical trends in settlement patterns on the other. While in the South, some residents face threats of displacement from the latest in a series of pending eviction drives, the relatively larger area of North Caloocan has for decades made it a choice site for government housing projects for the urban poor.

North Caloocan is a viable case study for observing tensions between state planning narratives and the often messy nature of informal settlement patterns on lands of ambiguous ownership status. Spatial representations in local government planning documents reflect a desire for a distinct sort of urban development capable of negotiating the challenges posed by population growth owing to past rural-urban migration flows. South Caloocan's proposed zoning map (Caloocan SEP, III:91) reveals the bulk of an old cemetery overlapping with a mix of residential, industrial, and commercial areas. Newly declared commercial and industrial zones represent spaces transitioning from predominantly residential use to mixed land use locales. A strategy of urban concentration and segregation

is hoped to bring about a kind of decongested form of growth, which would allow for the protection of residents from industrial pollutants, encourage investment in renewal areas, and manage industrial and commercial developments in allotted urban growth control areas.

As a strategy for promoting and concentrating urban growth, old subdivisions have become target Areas for Priority Development. The goal is to allow for a more clearly defined spatial segregation of residential from industrial and commercial land use areas while increasing overall commercial land availability in both North and South Caloocan. This is to be achieved through the merging of neighboring residential blocks into a series of exclusive housing community complexes or “superblocks,” while South Caloocan’s urban core is transformed into a Central Business District, with more open spaces and provisions for pedestrian flows (Caloocan 2003a). Flooding has been seen as a major problem in South Caloocan. There are plans to target the tributaries of Estero de Maypajo, Navotas River, and Casili Creek for slum upgrading and the clearing of river easements of illegal structures and informal settlers deemed to be a major cause of flooding. In sum, while state plans for South Caloocan reveal a concern for urban decongestion and environmental risk mitigation for informal settlement families living along danger zones, the North’s zoning policies appear distinctly opposed: actively seeking growth while concentrating “development” in specially allotted urban centers.

Caloocan’s Social and Economic Profile (SEP) points to the need to expand industrial, and in particular, commercial growth in order to mitigate the after-effects of decades of population growth from migration flows and government resettlement projects. The SEP posits a mismatch between “supply and demand” for the city’s public service and employment opportunities—the struggle to keep up with rising population growth amid a scarcity of jobs, commercial activities, and public services, with residents often compelled to travel long distances on a daily basis. This has become an added burden on public transport infrastructure while entailing lost revenue for the city in terms of economic opportunity costs.

As a solution to this, the city’s physical framework plan proposes the development of urban cores or hubs strategically located between nodes and sub-centers that link the core to the centers of neighboring cities and municipalities. The goal is to facilitate commerce between these points while “the hub at the same time shall be an urban promotion area, requiring immediate utilization of special zoning and urban management systems that are appropriate for its long-term development” (Caloocan 2003a, 13). In North Caloocan, future major centers include the Camarin and near-Camarin areas, including the Susano-Zabarte road

intersection, while proposed subcenters include the Deparo-Susano and Congressional-Susano Road Intersections, a commercial site at Bagumbong Road, and the Quirino-Malaria Road intersection.

We conducted a series of interviews and a participatory mapping exercises with leaders and members of organizations of two barangays in Caloocan. Much of the North Caloocan study site was initially devoted to agricultural uses or vacant lands until the 2000s, but it experienced a steady stream of migrants from rural areas who bought informal rights to settle and build houses. The barangay is characterized by the strong and active presence of homeowners associations (HOA). Street names, for example, are set not by national government officials but by the residents themselves, names often associated with their respective HOAs. Some of these have been formalized and recognized at least at the barangay level. The absence of specific street names is a reflection of the fluidity of property ownership rights in general, something that has been a source of insecurity for a number of these groups.

The biggest source of insecurity for residents is the fact that their barangay falls under the Tala Estate. During the Spanish colonial period, Tala Estate was a part of friar-owned lands that spanned over 7,000 hectares. These lands were later further divided up between a handful of private individuals in a mass buy-out of government properties in the years following the Second World War. While many residents today are first- or second-generation rural migrants, others resettled there through government public housing projects. Yet access to water, electricity, and basic health services, the construction of concrete roads, as well as a local basketball court, were realized only largely through their pooled resources. Residents note few opportunities for formal work within the city which means most commute long hours every day to earn a living.

It is amid this backdrop of insecure land tenure, poor access to social services, and multiple conflicting claims on land that residents have expressed concerns over zoning categories and future government projects. The proposed land use zoning maps identifies much of the southern section of the barangay—currently under residential use—as industrial. Parts of the barangay along major intersections were also designated as commercial zones. While such a designation does not automatically prohibit residential uses, a long history of land conflicts and their degree of informality both instill fear among residents of possible displacement to give way for industrial and commercial activities in the area.

Leaders of a HOA enrolled in a Community Mortgage Program (CMP) are particularly worried about more than a decade's worth of their mortgage

payments. This concern is on top of the constant challenges of delivering timely payments and settling interests that have accumulated over time. The problem of delayed mortgage payments is a result of the uneven capacity of community members to pay, which the CMP fails to seriously consider. Most members—working informally or paid low wages—find it nearly impossible to allot part of their income for regular mortgage contributions.

The industrial-commercial thrust of the local government unit, manifested in proposed land use zoning of their barangay, may deliver economic growth in the form of tax revenues and employment opportunities. However, residents who participated in the community mapping exercise expressed much more simple desires. Their vision of development is formal recognition of their rights to land and improved access to social services. The possibility of industrial and commercial growth in their barangay increases uncertainty about their tenure and may not necessarily lead to improved access to services. This vision contrasts with government land use plans which operate with a different assumption about the relationships between economic growth, land use, and development. In the case of North Caloocan, sustainability that emphasizes social equity would mean that the ability of residents to determine their own land use features and meet their desired development goals will not be undermined by local government emphasis on commercial and industrial growth.

### **Conclusions and Recommendations**

We set out to contribute to land use planning policy for urban sustainability in the Philippines in three ways: (1) by emphasizing social equity and justice in sustainable development guiding framework; (2) by considering how community participation may be improved in land use governance; and (3) by proposing planning methods that enable planning to be more sensitive to the needs, contexts, and practices of people on the ground. Discussions of sustainability often turn to two pillars of the concept—economic growth and ecological integrity through more recent iterations such as the green economy and green growth. We took a different course to highlight the often overlooked element of sustainable development discussions: social equity. We argued that land use planning and policy-making is a crucial venue for bringing attention to issues of social equity or justice and addressing many of problems associated with urbanization. Utilizing more participatory mechanisms and expanding land use planning methods may lead to land use planning that takes into account procedural equity concerns. Cities that are not inclusive, equitable, and just cannot be sustainable in the long run.

An analysis of national land use policies and specific CLUPs of two local government units show that these documents contain elements of sustainability thinking although the social equity component is less clearly articulated, especially when in conflict with economic growth imperatives. Building participation of communities in governance and planning, on the other hand, is already in place in several laws and policies but could be strengthened further through better implementation on the ground.

In Calamba, urban land use change driven by weakly-regulated economic growth has created conflicts and compatibilities between commercial, residential, industrial and agricultural activities. Problems associated with urban growth such as traffic congestion have justified large-scale infrastructure projects that could disproportionately impact particular groups of people who depend on Laguna Lake for their livelihood. Bringing social equity to the fore in this context means attention to the right of shoreline communities to sustained lake-based livelihood amid urbanization, and to the consideration of who bears the burden and costs of such developments. In Caloocan, land tenure issues with deep historical roots continue to create uncertainty for many residents in the informal settlements. They encounter land use zoning and maps as products divorced from their daily concerns and see them as tools that may be used to justify future evictions. An approach sensitive to issues of social equity would pay careful attention to the types of zoning and land uses that best addresses the concerns of marginalized groups with ambiguous housing tenure while delivering their basic needs for social services. Asking who will bear the burdens and costs of large-scale infrastructure projects and industrial-commercial developments while discussing alternative futures refocuses the issue away from solely economic growth and environmental integrity concerns.

In order to address the apparent lack of community participation in planning, this study employed technologies of participation, such as network mapping and community mapping, in our case study sites. The community mapping exercise we conducted provided a way to understand and translate onto a map the important spaces and practices that produce the everyday lives of city dwellers. It is a venue for residents to see their places and communities in a different light while bringing them together to talk about issues and how to address them. The community maps produced can be a tool to show planners, technocrats, and government officials the everyday spaces and activities that are often rendered invisible or are routinely ignored.

Several institutional, political, and structural factors in the land use planning process constrain effective planning for sustainability. For example, the short

CLUP production time and financial constraints limit the kinds of data that can be collected for assessment and evaluation. Bottom-up and participatory approaches, such as community mapping exercises and ethnographic work, tend to be time- and resource-consuming, especially for large and populous local government units. The mismatch in the scales of planning, participation, and social and ecological processes of urbanization may also limit the applicability and effectiveness of such efforts. However, building the capacity of local governments at different levels (municipal and barangay) to conduct these activities may help in facilitating participatory processes in particular scales.

The interface between land use planning and the practices of city dwellers is an important site of intervention in creating better policies. It seeks to complement the role of the state and the experts in planning spaces and opens up possibilities for learning and innovation in planning practices through adaptive governance through stronger community engagement. We therefore suggest the following policy or policy-relevant recommendations that can guide policy-making at the local and national levels:

**Articulate, define, and emphasize social equity and social justice in land use policies.** While economic growth and environmental integrity have been prioritized in Philippine land use policies, social equity has relatively been poorly defined and mobilized. We recommend a stronger emphasis on the concept and a clearer articulation and operationalization of social equity in land use planning, especially as it relates with the other components of sustainable development. Intragenerational equity or social justice could serve as a guiding concept for equity in planning that needs to be explicitly stated and defined in policies and legislation. The proposed National Land Use Act, which seeks to integrate disparate policies on land use, could explicitly contain a “social philosophy of land” (Serote 2004) that will guide the planning process in the Philippines.

**Expand methods and spatial imaginaries of land use planning.** Urban land use planning currently relies on consultants and local governments collecting and collating secondary data about cities while employing spatial overlays to assess current and future land use needs. The objective and scientific land use planning approach may not necessarily capture issues of equity and social justice, and may provide partial understanding of community dynamics. We recommend extending approaches toward a broader and deeper knowledge of communities to include histories, mobilities, constructions of the environment, and visions of the future, among others. We suggest that ethnographic methods, focus group discussions, network mapping, and community mapping be actively included in the toolkits of land use planners. Volume 1 of the CLUP Guidebook (HLURB 2006)

provides some illustrations, and step-by-step instructions on how to actively consult stakeholders in the planning process. Beyond a concern for assuring efficient allocation of land, we also advocate a more relational and open view of space, one that is sensitive to multiple practices and production.

**Democratize land use planning and improve local planning capacities.** Beyond strengthening community participation, a broader goal to address social equity should be to mix the practice of top-down land use planning and the limited actors involved in the process with bottom-up and participatory approaches that include more participants. While local government units and consultants may be better equipped and situated at a more appropriate scale to make particular land use decisions, a democratized planning system that gives power to those whose lives are being planned may provide some checks and balances to the political, bureaucratic and institutional limitations of top-down planning. This fits with the spirit and specific targets of the Sustainable Development Goal that promote participatory and inclusive planning for more sustainable cities and communities. Challenges will include reconciling conflicting plans between communities on cross-scalar issues, recognizing differences and power relations within even the smallest unit of planning, and improving the limited capacity of participants to gather data, conduct mapping activities, and create their own plans.

**Use community mapping as a tool for community engagement.** Maps are powerful tools which can present information to suit a particular purpose. When used properly, maps can also tell the stories of communities, be a liberating tool to engage communities, and question assumptions made by state planners. Community mapping can be further institutionalized as a more immersive and interactive form of consultation with the residents of a community. This process gives the opportunity to the community to become experts in their own locality. By plotting their inside knowledge on a map, this platform provides them a space where they can freely share their opinions and insights on the challenges and issues they face in their community. The process produces a tangible output whose participants can already see and claim as theirs, giving them voice and leverage in the planning process, and starting the conversation between the state and its constituents.

**Recognize and empower intermediaries that facilitate regular feedback mechanisms between the state and its constituents.** Intermediaries, such as civil society organizations, nongovernment organizations, and sector-specific organizations (e.g., church, women's, or senior citizen groups), are important links between the government and its constituents. Because of their organic

composition, the social support they provide, and the active role they play in the community, intermediaries are in the best position to know and assess the issues of their members. When intermediaries are recognized and sustained, people are given the chance to raise their most important issues. Committed intermediaries, especially those who have already been deeply embedded in the communities they serve, provide a sustainable and meaningful platform for feedback and consultation. In this case, the advantages of plural governance could be tapped to safeguard and promote interests of the marginalized groups.

**Make use of resources and technical expertise from other government agencies.** The planning process need not be undertaken solely by the local government. National and other government agencies can provide technical expertise if needed, and the resources they freely share may be of great use to local government units and community groups. Volume 1 of the CLUP Guidebook (HLURB 2006) can be a good starting point. It contains a twelve-step process for the preparation, implementation, and monitoring of the comprehensive land use plan. More importantly, it includes steps and recommendations for involving the community through technologies of participation and a visioning exercise with all stakeholders.

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