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# Uneven, Fragmented, and Contested Land

## Challenges to Urban Risk-Resilient Land Use Planning in Metro Cebu

*John Ryan Jacot*

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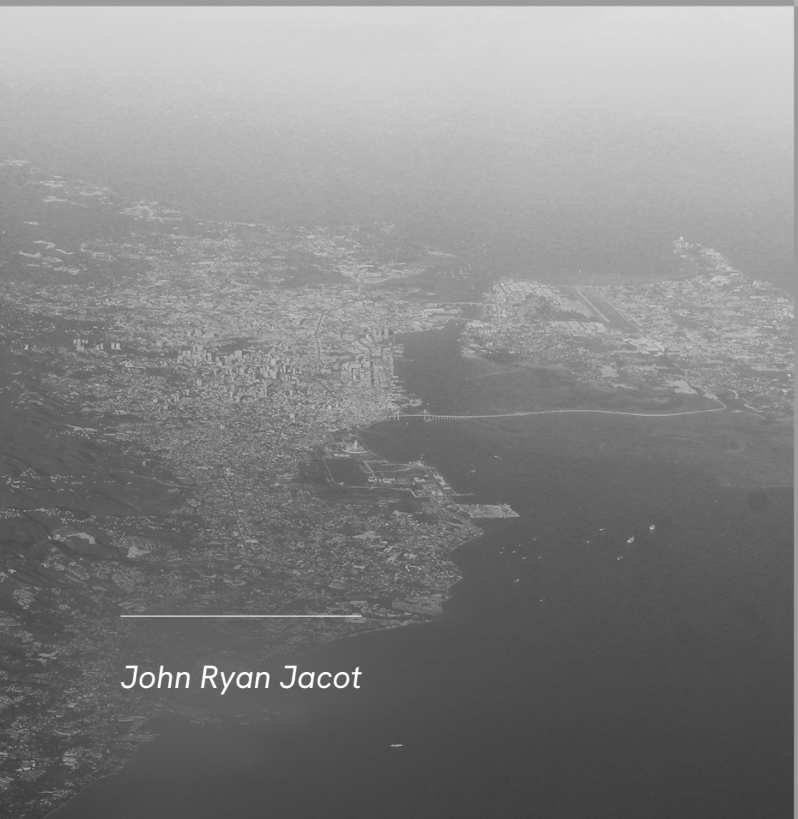

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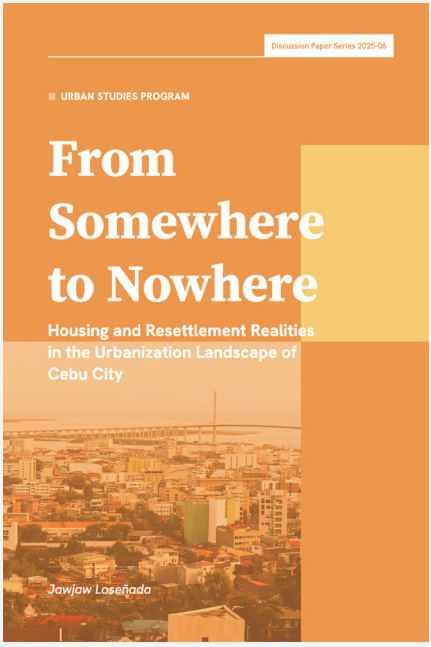


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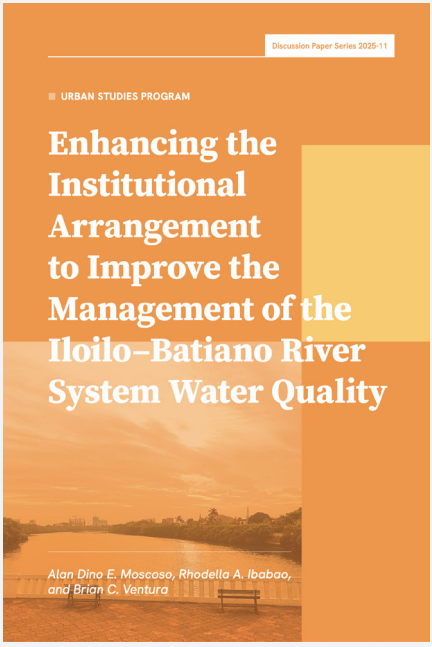


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# UNEVEN, FRAGMENTED, AND CONTESTED LAND

## Challenges to Urban Risk-Resilient Land Use Planning in Metro Cebu

**John Ryan Jacot**

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# HIGHLIGHTS

Rapid urbanization puts severe pressure on Metro Cebu's resources, especially toward land use in its urban core, Cebu City. Without regulatory and protective controls, urban risks and vulnerabilities such as flooding disasters would likely worsen and become more difficult to manage.

Land use planning is a critical instrument in managing and mitigating urban risks and vulnerabilities in the long-term. In principle, land use decisions inform responsive development control zoning measures and structural interventions that can reduce risks and enhance resilience.

This paper identified key challenges to urban risk resilient land use planning in Metro Cebu, which include:

- Scalar Incoherence in Planning for Metropolitan Urban Risks: Urban flooding risks are transboundary, but local planning frameworks are largely created and implemented in isolation from the land use and spatial strategies of neighboring LGUs.

- Internal Fragmentation: Policy actions within an LGU are initiated in relative isolation from one another — undermining the "collective and comprehensive approach" that special flood mitigation bodies supposedly embody and practice.

- Limited Public Participation: Public participation in urban risk governance remains limited and constrained by the privileging of technical knowledge and biases as well as tokenistic forms of inclusion where civil society groups and affected residents are deemed passive participants in collaborative fora.

## ABSTRACT

Land use planning is a critical tool for mitigating urban risks and vulnerabilities and facilitating sustainable development. Regulating and planning current and projected land use reduces vulnerabilities and increases the resilience of cities in responding to emerging climate risks in urban centers. However, land use planning in the Philippines remains severely fragmented and poorly implemented due to the absence of a national land use framework. Another reason is the fragmented creation of comprehensive land use plans by local governments that largely develop and enact their plans in isolation from other localities but are embedded in overlapping political asymmetries and the diverging public and private interests in urban governance. This has resulted in failures and disjunctions in the responses to the integrated and cross-boundary urban risks and challenges that Philippine cities such as Cebu face from flooding disasters, solid waste mismanagement, land subsidence, and water scarcity. This discussion paper examines the challenges and opportunities in integrating urban risks in the formulation and implementation of land use plans in Metro Cebu with a focus on Cebu City and its flood risks. It highlights the case of Cebu City because of its unique governance and spatial context as the urban core of the greater metropolitan area, marked by relatively autonomous coastal cities with a central environmentally protected area. The key challenges to risk-resilient land use planning include incoherence in the scale of jurisdictional accountabilities in planning for metropolitan urban risks, horizontal fragmentations in flood management and land use planning, and limited and constrained public participation in the policy process. The recommendations of this paper are informed and guided by sustainability with a specific lens on an inclusive and just resilience framework.



Keywords: land use, local dynamics, Metro Cebu, planning, urban risk governance

## BACKGROUND

Massive flooding remains one of the critical issues that continue to afflict Cebu City. This is broadly due to the city's exposure to increasingly complex and integrated urban risks and vulnerabilities which have worsened due to climate crisis and rapid urbanization. Specific factors contributing to the risk of flood disasters in Cebu City include heavy rainfall, the lack of drainage maintenance, the clogging of solid waste in the city's waterways, deforestation, and upland infrastructure ventures (Lim 2023; Cebu City News and Information 2023; UN Human Settlements Programme 2018). In response to the heightened risk of floods, the current Cebu City administration organized the "Task Force Gubat sa Baha" (War Against Floods) to streamline and integrate the city's efforts in flood risk mitigation, solid waste management, and river rehabilitation. Specific functions and projects of the task force include the clearing of drainages, the desilting of rivers, the construction of gabion check dams, the improvement of riverbanks, and the enhancement of public awareness on household solid waste management. Crucially, the task force also facilitates the clearing of structures within the three-meter easement of rivers in compliance with the country's Water Code and Urban Development Housing Law. In 2022, at least 14,000 illegal structures were found to have encroached on the three-meter easement of rivers in the city, which includes the households of informal settlers and commercial establishments (Cerojano 2022; Semilla 2023; Sitchon 2022).

Land use planning is a critical but often underlooked instrument in managing and mitigating urban risks and vulnerabilities, including floods (UNFCOP 2017). Land use plans outline the long-term considerations for the optimal use of space in a locality including its management of hazards and risks. For its part, Cebu City is in the process of updating its comprehensive land use plan (CLUP) and its corresponding zoning ordinance. Its current CLUP was developed in 2006, and its zoning ordinance has not been renewed since 1996, which means that the land use strategies of the city are unable to set responsive direction for the development of Cebu City. This also means that the city's current land use tools and guides do not offer adequate regulatory mechanisms to accommodate its forecasted urban expansion and the emerging risks and challenges that it faces, including the heightened risk of flooding disasters (UN-Habitat 2018). Thus, this discussion paper examines the challenges and opportunities in integrating urban risks in the formulation and

implementation of Cebu City's land use plan with a focus on flood risks. This paper also identifies key challenges to risk-based land use planning given the metropolitan context of Cebu City and the transboundary nature of emerging urban risks and challenges. The recommendations of this paper are informed and guided by sustainability with a specific lens on an inclusive and just resilience framework.

## LAND USE PLANNING IN THE PHILIPPINES

Land use planning is defined by the United Nations Food and Agriculture Organization as

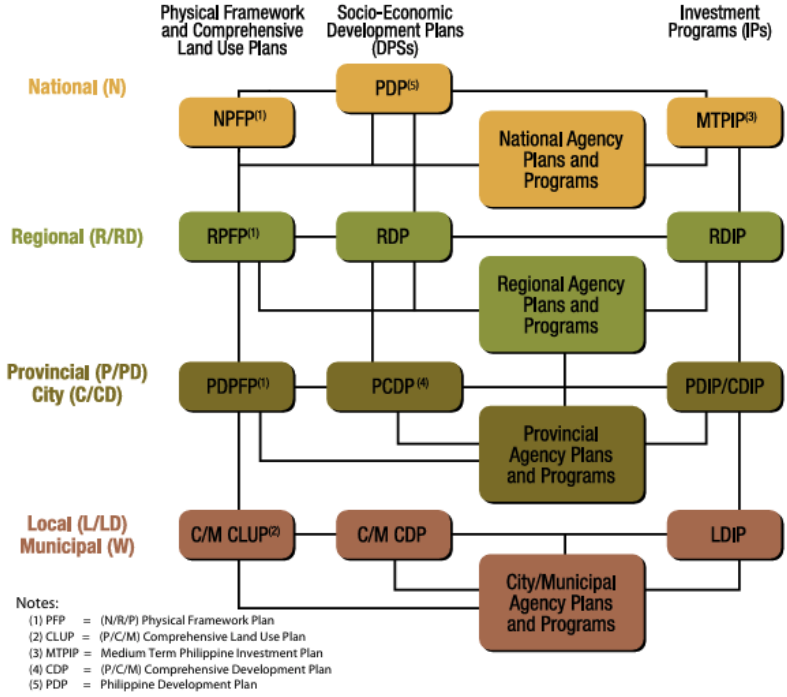
> the systematic assessment of land use and economic and social conditions in order to select and adopt the best land use options. Its purpose is to select and put into practice those land uses that will best meet the needs of the people while safeguarding resources for the future. The driving force in planning is the need for change, the need for improvement management or the need for a quite different pattern of land use dictated by changing circumstances. (1993, 6)

In principle, land use planning facilitates and ensures equity and transparency in the allocation of land resources. Since sustainability discourses gained traction in the last two decades due to climate change and planetary concerns, land use planning has been conceptualized as a strategic approach to achieving sustainable development by balancing social, economic, and environmental factors in determining the most optimal use of land for present and future needs while fostering environmental stewardship and social equity (UNEP 1999; Randolph 2004).

In the Philippines, land use planning is hierarchically structured and requires vertical and horizontal coordination between and among local, regional, and national planning structures and instruments depending on politico-administrative boundaries as well as existing laws covering protected areas. Local government units (LGUs) are responsible for drafting and developing the comprehensive land use plan (CLUP), the main local land use planning instrument, that embodies "specific proposals and strategies for guiding [and] regulating growth and/or development" (Housing and Land Use Regulatory Board 2014) through the allocation of land resources in an LGU's territory.

In principle, developing the CLUP should be informed by the sectoral, development, and investment plans of national government agencies, barangays, and in the case of component cities and municipalities, the planning frameworks of the province (see figure 1). The CLUP thus outlines and steers local development trajectories, as embedded in a hierarchy of national, subnational, and sectoral trajectories, to ensure the sustainable use of critical resources and assets in localities.

Figure 1. Hierarchy and Linkage of Planning Instruments in the Philippines




- Source: Comprehensive Land Use Plan (CLUP) Guidebook of the Housing and Land Use Regulatory Board (2013)

As Lech and Leppert (2018) explained, there are vertical and horizontal frictions in the land use planning process that occur due to the misalignment of these embedded plans and information gaps between agencies. For example, in the absence of a Barangay Development Plan, CLUPs can only assume the planning goals and reported land utilization of barangays. There

are also cases when comprehensive development plans (CDPs), which ideally operationalize the CLUP, lack coherence because it takes time for the land use plan to be updated. In a study recommending the passage of a national land use act , Navarro (2023) stressed that without a national regulatory framework for land use planning, conflicts due to intense pressure on the competing use of land would likely continue. The same study also pointed out that the current land use planning framework; which is composed of a patchwork of laws and guidelines that regulate land resources in the areas of agrarian reform, protected areas, ancestral domain, urban development, and disaster risk reduction; would, in the long run, make rationalizing the competing uses of land more difficult since policymakers, planners, and stakeholders would operate in silos.

The competition that occurs over land use stresses that the planning process is hardly a technical-administrative matter set in a complex, overlapping planning hierarchy. Instead, land use planning is a "function of power and is a contested arena of power struggles" (Suhardiman, Keovilignavong, and Kenney-Lazar 2019, 347) that is shaped by the diverging and competing interests of various actors who are embedded in unequal sociopolitical relations that are manifested in the uneven use of land resources. Central and local planning structures, LGUs, and land use stakeholders are not independent of the interaction of existing sociopolitical structures, place-specific historical context, and development discourses that construct "unequal" cities. Scholars have, for instance, discussed how central state institutions and elite structures have taken a largely dominant position in development planning—including land use planning—as it frames and defines policy problems in the context of technical bureaucratic exercises, supports and sustains dominant policy narratives, and displaces substantive participation and diverse perspectives from community stakeholders (Suhardiman, Keovilignavong, and Kenney-Lazar 2019).

## LAND USE PLANNING IN URBAN RISK GOVERNANCE

Urban risk governance involves the institutional frameworks and policy processes that aim to identify, assess, regulate, reduce, or control risk problems through integrative tools and interventions (Renn et al. 2018). Because of the complexity of overlapping urban risks, scholars stress the need for collective, multi-actor approaches to understanding and addressing risks in hybrid and joined-up bodies with structured overlapping jurisdictions that connect local and central governance structures to community stakeholders (Okada 2018). While the multilevel and cross-jurisdictional dimensions of urban risk governance can facilitate more adaptive and integrative approaches to enhance resilience (Renn 2008; Renn and Klinke 2014; Renn and Schweizer 2009), it requires clear structural configurations that can effectively steer the diversity of actors involved in governing risks to prevent fragmentation, which can enable more risks, and inconsistencies in planning and capacity (Renn et al. 2018; Charnley 2000).

The complexity of urban risks being "governed" results from the interplay of the impacts of climate change, uncontrolled urbanization, and heightened exposure of vulnerable and marginalized communities to these risks. Integrating these considerations in planning frameworks and instruments partly ensures that the structural configurations in urban risk governance are strategically positioned to reduce risks in the long term. The 2024 World Cities Report stresses the urgency of integrating climate action into urban planning and design instruments to leverage opportunities for mitigation and adaptation and to integratively mainstream resilience efforts from the bottom up starting with the local level of governance where authorities can best involve the active participation of urban communities (UN-Habitat 2024). Land use planning is likewise instrumental in managing and mitigating urban risks and reducing the damages resulting from flooding (UNFCOP 2017; Palom et al. 2017). The management of the "past, present, and projected use of land" (Serote 2004) has wide-reaching and long-term impacts on the way cities manage critical infrastructure and resources and set the direction of development with flood risks in mind. The Sendai Framework for Disaster Risk Reduction 2015–2030 even stresses the role of land use planning in mitigating and responding to disaster risk drivers (UNISDR 2015; UNFCOP 2017)—emphasizing the need to

update land use plans for responsive disaster risk management at the national and local levels (UNDRR 2015).

More importantly, risk-informed land use planning ensures the strategic positioning of present and future land use with respect to the management of physical assets and human communities in an area by recommending the suitable level and types of development as well as the structural interventions that can reduce urban risks. Thus, in principle, planning structures in local governments would be better informed in making optimal and sustainable land use decisions that ensure the productive use of land while reducing risks.

Scholars have introduced several land use strategies to mitigate and adapt to the risk of urban flooding. Palom et al. (2017) emphasize the use of flood hazard maps to identify flood risk areas where development will be limited if not banned to reduce the exposure of people and economic activities. If a flood-prone area is occupied, flood control structures will be targeted for construction in the area, or authorities will provide incentives to change existing land uses and decongest high-risk areas. Palom et al. (2017) also added that flood risk management should always be accompanied by effective risk communication to facilitate the acceptance of land use changes. Sarkissian et al. (2022) introduced a land use planning matrix for flood risk reduction that sets criteria for suitable land uses depending on the flood hazard levels of an area—demarcating zones based on their flood hazards (see table 1).

**Table 1. Land use planning matrix for flood risk reduction**

| EXPOSURE TO FLOOD HAZARDS | OCCUPANCY AND LAND USE |
|---|---|
| High exposure | Low occupancy land uses where development is restricted and existing structures should be prioritized for flood-resilient retrofitting |
| Medium exposure | "Living with water" approach (Global Center on Adaptation 2021) where green spaces will be developed |
| Low exposure | Structural development is allowed with strictly enforced building codes that require flood-resistant features and social protection programs for occupants |

■ *Source:* Hawkesbury Nepean Flood Management Advisory Committee (1998) as cited in Sarkissian et al. (2022)

In the Philippines, the Comprehensive Land Use Plan (CLUP) Guidebook published by the Housing and Land Use Regulatory Board (2013) similarly outlines key principles in regulating demarcated zones for climate change adaptation and disaster risk reduction (see table 2). The tightening of regulations and development controls are likewise coherently tied to the exposure and susceptibility of a zone or area to climate hazards. The same guidebook also introduces regulatory land use provisions such as the designation of no-build zones and expanded easements along rivers and waterways, the identification of redevelopment areas that require mitigating interventions, the imposition of restrictions and building criteria in hazard overlay zones in areas with manageable risks such as those indicated in table 3, and the designation of special management districts (coastal zones and watersheds) to serve as forums where integrative development and planning of zones with critical resources to be comanaged with other LGUs.

**Table 2. Basic Principles in the Formulation of Regulations**

| SUSCEPTIBILITY TO FLOOD HAZARDS | LAND USE REGULATION |
|---|---|
| Highly susceptible | Prevent development and maintain as open space by limiting land use to conservation, recreation (parks), or agriculture and prohibiting reclassification to residential, commercial, or industrial use |
| | In areas where development has already occurred, protect life and existing development from losses through protective infrastructure where feasible, setting up early warning and evacuation systems, and redevelopment and retrofitting |
| Moderately susceptible | Keep land use intensity, building value, and occupancy to a minimum through density restrictions, minimum lot cuts, and clustering of development where risks are lowest |
| | Risk mitigation can also be done through urban design standards and site planning standards |

■ Source: Comprehensive Land Use Plan Guidebook of the Housing and Land Use Regulatory Board (2013)

**Table 3. Sample Criteria and Restrictions for a Flood Overlay Zone**

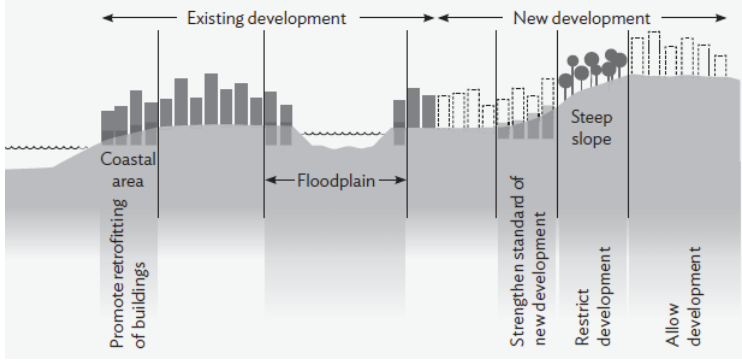
| CRITERIA | POTENTIAL RESTRICTIONS |
|---|---|
| Moderate Susceptibility to Floods<br><br>Floodplain Area (outside the Floodway) where risk is manageable and evacuation (whether vertical or horizontal) is possible during flood | Allowable Land Uses:<br>1. Agriculture<br>2. Recreational<br>3. Residential<br>4. Commercial<br>5. Industrial<br><br>With appropriate density, building design, and environmental restrictions below:<br>*Building Design Standards*<br>1. Required elevation requirements for the lowest floor line of new constructed and improved buildings<br>2. Requirements for construction of structures on stilts where applicable<br>3. Limitations on uses of enclosed spaces below flood elevation (for parking, access, or limited storage only)<br>4. Wet and dry flood-proofing measures such as backflow valves, waterproofing for doors and windows, elevated electric circuits, etc.<br>5. Measures to compensate stormwater retention capacity of the building site due to infilling; and<br>6. Measures to retrofit existing buildings on Floodplain Zones.<br><br>Environmental Conservation and Protection Standards<br>Developments shall:<br>1. Preserve riparian strips/ecological buffers along water channels<br>2. Not alter natural drainage patterns<br>3. Not alter, fill, or build on the floodplain without proper drainage design and without proper consideration of possible inundation effects of nearby properties<br>4. Avoid/ minimize culverting or canalization of watercourses unless necessary for access<br>5. Use permeable pavement materials and sustainable urban drainage systems such as filtration trenches, retention ponds, swales, rainwater storage, green roofs, and other related technologies that can improve stormwater quality, decrease runoff, manage peak flows, and make productive use of stormwater.<br>6. Protect water bodies from sedimentation and erosion.<br>7. Design internal drainage so as not to increase turbidity, sediment yield, or discharge harmful substances.<br>8. Retain at least 10% of the property for open space.<br><br>The following may also be required for the locational clearance of allowable residential, commercial, and industrial uses: Drainage Impact Assessment Statement, Environmental Compliance Certificate, and evaluation of existing infrastructure capacity for drainage |

■ Source: Comprehensive Land Use Plan Guidebook of the Housing and Land Use Regulatory Board (2013)

Furthermore, in a guidance note for planners, the Asian Development Bank (ADB) (2016) also pointed out that integrating disaster risks into land use planning requires risk-sensitive development or redevelopment zoning policies, development control instruments, and disaster risk reduction-related public investments that enhances urban resilience and opportunities to incorporate longer-term risk considerations that account for changing hazard patterns due to climate change. Figure 2 demonstrates how spatial considerations, as demarcated by zones, should be used to inform risk-sensitive land use interventions. In hazard-prone zones, protective measures such as structural retrofitting and restricting activities that can escalate risks are recommended. Risk-resilient land use planning also allows public authorities to strategically allocate critical resources and infrastructure as well as emergency response assets in medium- to high-risk areas.

Palom et al. (2017), Sarkissan et al. (2022), and the Asian Development Bank (2016) recommend the inclusion of the stakeholders of the "communities at risk" in the land use planning process. The participation of community stakeholders guarantees that urban risks are communicated effectively and that arising land use policy solutions are formulated on the basis of consensus to build trust and ensure social acceptance. The Asian Development Bank (2016) also pointed out that engaging with stakeholders helps governments determine people's perception of risks and shape their understanding of the interaction of urban risks and vulnerabilities and future development actions—ensuring that risk-sensitive goals and planning frameworks are cascaded and embedded across the community.

Figure 2. Potential Risk-Sensitive Policies Proposed in a Land Use Plan




■ Source: Asian Development Bank (2016), available under a CC BY 3.0 IGO license

However, the framing of community consultations also matters. Do they, for instance, privilege technical expertise where urban planners, policymakers, and bureaucrats dominate the discourse surrounding land use planning? Under this scenario, the consultations with "communities at risk" may be regarded as tokenistic procedural exercises meant to operationalize sustainability and social equity imperatives while positioning the residents of affected settlements as passive participants within pre-structured planning frameworks. In the Philippines, Gera (2016) argued that while civil society movements and interest groups have considerable influence, the institutional mechanisms for public participation in areas of environmental governance are undermined by fragmentations within civil society and the domination of patrimonial power structures in Philippine policy making. Cariño and Corpuz (2009) further added that the participation of civil society groups is constrained by vested interests. Understanding that institutional and political factors constrain sustainable and participatory land use planning, Saguin et al. (2017) recommended the conduct of participatory mapping exercises, guided by ethnographic methods, at the local level to operationalize sustainability and social equity in land use planning. In doing so, LGUs and planners benefit from a more nuanced understanding of people's awareness and perception of risks, community histories, and their insights on the challenges posed by the hazards within their proximity. Bridging the gap between the central and local planning structures and community constituents in the context of land use planning also enhances a sense of co-ownership of the area's problems—including dealing with urban risks—and in the long run, allows for smoother and community-sensitive disaster risk prevention strategies.

## URBAN RISK CHALLENGES IN METRO CEBU

Considered one of the main urban centers of the country, metropolitan Cebu is the regional center of Central Visayas with the bulk of the region's economic activities and population being concentrated in its three independent cities (Cebu, Mandaue, and Lapu-Lapu), four component cities under the provincial government (Carcar, Danao, Naga, and Talisay), and six municipalities (Compostela, Consolacion, Cordova, Liloan, Minglanilla, and San Fernando). In particular, roughly 64 percent of the regional population resides on the island of Cebu. Cebu City has the biggest urban population with around 908,195 residents (around 94 percent of the city's population); the neighboring Mandaue City is totally urbanized (NEDA Regional Office 7 2023). Continued

and uncontrolled urbanization puts severe pressure on Metro Cebu's scarce land resources especially toward its urban core, Cebu City. Without regulatory and protective controls in land use that would ideally demarcate the urban limits of the city, risks and vulnerabilities associated with climate change would likely increase. The urban sprawl could threaten wildlife, ecosystems, and water reserves in the Central Cebu Protected Landscape and even expand urban pressures to the cities and municipalities surrounding Cebu. The urban risks and vulnerabilities that the metropolitan area faces include the risks of subsidence, flooding disasters, water shortages, and the disruptions caused by reclamation ventures. Land subsidence is associated with unsustainable groundwater extraction, which reflects the demand and pressures for Cebu's scarce resources (Sulapas et al. 2024; NWRB 2018). Reclamation ventures by Cebu City's neighboring cities and municipalities indicate an increasing demand for land to accommodate development. However, the same ventures threaten coastal ecosystems that low-scale fisherfolk communities; micro-, small, and medium-sized ecotourism providers; and municipalities rely on for income.

Urban flooding, which is the foremost urban risk centered in this paper, is attributed to heavy rainfall, the lack of drainage maintenance and the clogging of solid waste, unregulated upland infrastructures, and settlements and structures within the three-meter easement of waterways (Lim 2023; Cebu City News and Information 2023). On the part of the Cebu City government, the Task Force Gubat sa Baha ("War Against Flooding") was constituted by former Mayor Michael Rama to streamline and integrate the city's efforts in flood risk mitigation and river rehabilitation. The program presently focuses on the clearing of structures along the three-meter easements of the city's major rivers in compliance with the country's Water Code and Urban Development Housing Law. As previously mentioned, urban flooding in Cebu City is not limited to the territorial limits of the city because of the transboundary nature of the hydrological dynamics behind flooding. Flooding disasters in Mandaue City barangays near the Butuanon River, for instance, are associated with the heavy rainfall in the mountainous barangays of Cebu City, where the Butuanon River originates (Mascardo 2023; Palaubsanon and No-ot Magsumbol 2024). There have been metropolitan responses to urban flood risks in Cebu such as the "Beyond Borders Transboundary Rehabilitation Plan for Butuanon and Mahiga Rivers 2023–2027" by the LGUs of Cebu City and Mandaue City with the

approval of the Central Visayas Regional Development Council (RDC) (Sunstar Cebu 2024; Padronia & Virador 2024).

As far as land use strategies for urban risk resilience are concerned, Cebu City is currently in the process of updating its comprehensive land use plan (CLUP) and its corresponding zoning ordinance. The CLUP Guidebook, crafted by the Housing and Land Use Regulatory Board (2013), indicates that CLUPs and consequent zoning ordinances include regulations that are targeted to reduce or prevent by limiting allowable development depending on the risk assessment (see table 2). To date, however, the current CLUP of Cebu City was developed in 2006, and its zoning ordinance has not been renewed since 1996. This means that both the land use plan and zoning ordinance of the city are largely unable to set an accurate and responsive direction for the development of Cebu City in the next five to ten years (UN-Habitat 2018). This also means that the city's current land use tools and guides do not offer adequate regulatory mechanisms to accommodate its forecasted urban expansion and the emerging risks and challenges that it faces, including the heightened risk of flooding disasters (UN-Habitat 2018). While the proposed updated CLUP for 2023–2032 was recently endorsed by the Regional Land Use Committee last December 2024, fully implementing it and cascading the plan to the public as the city's official spatial strategy for the next decade can still take time.

## CHALLENGES TO URBAN RISK RESILIENT PLANNING

This section outlines the challenges and constraints to urban risk-resilient land use planning in Metro Cebu. The findings of this paper are informed by key informant interviews with city and regional planning officials and nongovernment organizations (NGOs) as well as roundtable discussions with affected stakeholders and city flood risk mitigation bodies such as the Task Force Gubat sa Baha. Identified challenges include (1) scalar incoherence in planning for metropolitan urban risks, (2) horizontal frictions and fragmentations in flood management and land use planning, and (3) limited and constrained public participation in risk planning.

### *Scalar Incoherence in Planning for Metropolitan Urban Risks*

The risks of urban flooding in Cebu are not bounded by the politico-administrative borders that demarcate LGUs from one another but LGU-based planning frameworks are. Thus, at the onset, CLUPs are drafted, deliberated, and implemented in isolation from other land use plans and do not necessarily complement the spatial strategies of neighboring LGUs. Despite the close proximity of the three independent cities of Cebu, Mandaue, and Lapu-Lapu, for instance, they do not have shared land use plans that integrate land use planning and zoning regulations beyond the LGUs. While there are subnational planning bodies that, in principle, mediate between competing plans and bridge inconsistencies to guarantee seamless risk planning such as the Regional Land Use Committee, not all LGUs have the same timeline, nor do they have the same capacity to draft their CLUPs and ensure that they aim at urban risk resilience. The subnational planning bodies often monitor the compliance of land use plans with the standards and development goals indicated in the regional development plan, as confirmed by an anonymous interview with a NEDA Regional Office 7 official:

> The LGU is the originator of a land use plan. Ideally, they do the plan in consultation with the stakeholders, of course, bringing in their expertise. In fact, they have processes in place to bring other national government agencies. This is before they elevate their land use plan to the Regional Land Use Committee. If ever there are conflicts, ideally, these are already resolved at the LGU level. These should be resolved at the level of staff work.[1]

In Metro Cebu, monitoring data from the Department of Human Settlements and Urban Development (DHSUD) (2024) indicate that most LGUs in the greater metropolitan area have not yet updated their CLUPs except Mandaue, Toledo, Cordova, Talisay, and Naga, which risks uneven levels and paces of risk-informed land use planning. Spatial strategies would remain fragmented without a regulatory capacity at the metropolitan or regional level:

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[1] Key informant interview with NEDA Regional Office 7 officials, 14 November 2024

> The LGUs have their own character and charter. Yes, they are part of the [regional development] plan, and they should be referring to the plan. But you cannot force them because they are LGUs. (Informant, in an anonymous interview with NEDA Region 7, 14 November 2024)

Because local governments "have their own character and charter," local chief executives have considerable leverage in ensuring environmental protections and land use regulations for risk resilience. This makes land use planning contingent on the priorities and interests of local chief executives whose interests may not necessarily align with those of neighboring executives:

> So it goes back again to the leadership. Back then, there were leaders in the country who were really pro-environment, right? Now, I do not know where they are. I haven't really heard of a mayor or a governor or a congressman who is really pushing for that. It goes back to the priorities—the LGU structure itself and the priorities of the leaders. (Informant, in an anonymous interview with NEDA Region 7, 14 November 2024)

A previous attempt to integrate planning on a metropolitan level to resolve the constraints of scales in development planning and urban risk resilience through the Metro Cebu Development and Coordinating Board (MCDCB), an interlocal and multilevel coordinating body composed of 13 cities and municipalities in Cebu (including Cebu City and the Cebu Provincial Government), regional line agencies and planning bodies, business sector representatives, and civil society organizations (Mega Cebu Blog, n.d.). The MCDCB aimed to facilitate integrated development strategies and policies in various areas including urban and land use planning and zoning, traffic management, urban renewal, and flood control and sewerage management. The integrated body signaled a governance innovation that attempted to institutionalize Metro Cebu as a governance concept without overhauling the Local Government Code of 1991 and the charters of LGUs. Thus, MCDCB did not have a clear juridical and legal identity that would give it regulatory powers over its members, especially LGUs (Hutchcroft and Gera 2024). Nevertheless, several big-ticket metropolitan plans are now being carried out after the board formally disbanded in 2020, providing metropolitan guidance as confirmed by an anonymous NEDA Regional Office 7 informant:

> [The MCDCB] was a collegial body of mayors or regional directors [of line agencies]. The members were exchanging and in a way, working with each other. The outputs of that body are still being used right now. There is, for example, a planned fourth bridge, a roadmap for sustainable urban development including an urban transport master plan, and sewerage plans. The structure itself [The MCDCB], however, is no longer [there]. (Informant, in an anonymous interview with NEDA Region 7, 14 November 2024)

The competing jurisdictional accountabilities of local governments inhibit the formation of joined-up metropolitan forms and approaches to governance including urban risk governance and risk-informed land use planning in particular (Gera 2018; Hutchcroft and Gera 2024). While the Regional Land Use Committee can serve as a subnational planning intermediary that facilitates metropolitan integration in risk-informed land use planning, it does not have direct regulatory capacities to ensure that LGUs abide by recommendations (except in delaying the endorsement of the CLUP) and undermines the capacity of LGUs to surface shared urban risks in its metropolitan context and deliberate corresponding interventions.

However, there is a growing opportunity for multi-city metropolitan planning integration through the initiative of the Cebu City Planning and Development Office (CPDO), which is the primary city unit in charge of drafting and developing the CLUP in consultation with policymakers and stakeholders, and other planning officials of neighboring cities:

> The department head [of the CPDO] encourages monthly meetings of planners in the city. Who facilitates this every month? Actually, the planners of Metro Cebu cities are willing to coordinate with one another to ensure that there is no conflict of interest among the different cities (Anonymous interview with a representative of the Cebu City Planning and Development Office, November 2024).

These monthly meetings have been referred to as “Metro Cebu Planners Monthly Meeting.” While promising in planning for transboundary urban risks such as flooding, the meeting is informal in that it does not function as a metropolitan planning agency with the guarantee of the shared enforcement of harmonized planning regulations to reduce flood risks.

### *Internal Fragmentation in Flood Management and Land Use Planning*

The Cebu City Government's framework for flood mitigation and control is internally fragmented, and several bodies within the city government develop their policy actions in relative isolation from one another. According to Cebu City Executive Order No. 2, series of 2022, the Task Force Gubat sa Baha, in principle, convenes the representatives of city agencies and even from the private sector "to ensure a collective and comprehensive approach to combat serious flooding affecting Cebu City." The structure or organization of the task force reveals that the special body has the capacity to convene and steer city agencies toward a collaborative framework for a "comprehensive" flood mitigation program, as revealed in Table 4.

**Table 4. Committees of the Task Force Gubat sa Baha**

| COMMITTEE | MEMBERS |
|---|---|
| Committee on Clearing of Structures | Chair: North and South River Commanders<br>Members:<br>Cebu City Disaster Risk Reduction and Management Office (CDRRMO)<br>Cebu Environmental Sanitation and Enforcement Team (CESET)<br>Division for the Welfare of the Urban Poor (DWUP)<br>Cebu City Policy Office (CCPO)<br>Road Management Authority (RMA) |
| Committee on Legal Establishment of Easement | Chair: City Legal Office (CLO)<br>Members:<br>North and South River Commanders<br>Business Permits and Licensing Office (BPLO)<br>Office of the Building Official (OBO) |

| COMMITTEE | MEMBERS |
|---|---|
| Committee on Relocation of Affected Families | Chair: Division for the Welfare of the Urban Poor (DWUP)<br>Members:<br>North and South River Commanders<br>Department of Social Welfare and Services (DSWS)<br>Liga ng mga Barangay (LNB) |
| Committee on Relocation Sites and Facilities | Chair: Division for the Welfare of the Urban Poor (DWUP)<br>Members:<br>North and South River Commanders<br>Department of Social Welfare and Services (DSWS)<br>Liga ng mga Barangay (LNB)<br>Cebu City Disaster Risk Reduction and Management Office (CDRRMO)<br>Department of Engineering and Public Works (DEPW) |
| Committee on Infrastructure | Chair: Department of Engineering and Public Works (DEPW)<br>Members:<br>North and South River Commanders<br>Road Management Authority (RMA)<br>City Planning and Development Office (CPDO) |
| Committee on Rainwater Tank/Cistern and Infiltration Beds | Chair: Office of the Building Official (OBO)<br>Members:<br>City Legal Office (CLO)<br>Liga ng mga Barangay (LNB)<br>Department of Engineering and Public Works (DEPW)<br>City Planning and Development Office (CPDO) |

| COMMITTEE | MEMBERS |
|---|---|
| Committee on Solid Waste and Waste Water Management | Chair: Cebu City Environment and Natural Resources Office (CCENRO) and the Department of Public Services (DPS)<br>Members:<br>Department of Public Services (DPS)<br>Liga ng mga Barangay (LNB)<br>Cebu Environmental Sanitation and Enforcement Team (CESET) |
| Committee on Policy | Chair: Office of the Building Official (OBO)<br>Members:<br>City Legal Office (CLO)<br>Liga ng mga Barangay (LNB)<br>Department of Engineering and Public Works (DEPW) |
| Committee on Public Awareness | Chair: Public Information Office (PIO)<br>Members:<br>Division for the Welfare of the Urban Poor (DWUP)<br>Department of Social Welfare and Services (DSWS)<br>Cebu City Environment and Natural Resources Office (CCENRO) |
| Committee on Clearing of Drainages | Chair: Department of Engineering and Public Works (DEPW)<br>Members:<br>Road Management Authority (RMA)<br>Department of Public Services (DPS) |

■ *Source:* Task Force Gubat sa Baha

The CPDO belongs to the committees on infrastructure and rainwater tanks/cisterns and infiltration beds, which reflects the planning office's role, in principle, to outline criteria for establishments in the city. However, in an anonymous interview last 16 July 2024, an official of the Task Force Gubat sa Baha disclosed that they do not coordinate with one another in the crafting of the city's Comprehensive Land Use Development Plan. Thus, there is an

information exchange gap between the planning office and the task force such that the current draft of the CLUP, which the CPDO hopes to pass in the city council next year, is not necessarily informed by the inputs of other city agencies and special bodies. This undermines the "collective and comprehensive approach" that the task force is supposed to embody and advance.

Presently, as shared during a roundtable discussion on flood risk mitigation on 22 August 2024, the task force's main functions have included the clearing of structures within the three-meter easement of the city's major waterways, the clearing of old drainage systems and the installment of new ones to complement existing structures, the construction of mini-dams to help manage water flow, the enforcement of water tank requirements for establishments in residential and commercial lots, and raising public awareness in household solid waste management practices.

### *Limited Public Participation*

Planning structures and frameworks privilege technical expertise and science in ensuring urban risk resiliency. However, as Lawrence and Manning (2012) argued, technical knowledge alone cannot fully deliver certainty in determining risks and their layers including a community's perception of risks. This is because urban risks are complex and ambiguous. The variability in the way people interpret risks and act on them is not nor should they always be grounded on expert judgments alone because risks are also informed by social factors in the community (familiarity, sense of control, perception of ownership of adaptation, etc.) and local knowledge concerning ways to respond, adapt, or "live with" urban risks (Renn et al. 2018). As Rose (2018) further argued, dealing with the ambiguity of risks requires approaches in risk governance that center on mutual learning across scientific and practical communities to promote the co-creation of joint knowledge and collaborative policy solutions.

In the case of Cebu City, public participation in urban risk governance remains limited and constrained by the privileging of technical knowledge and biases as well as tokenistic forms of inclusion where civil society groups and affected residents are deemed passive participants in collaborative fora. If asked about the reasons for lowland urban flooding along the city's waterways, a city official

remarked in an anonymous interview last 18 July 2024 that informal settler families who reside in the three-meter easement of rivers were to be blamed for urban flooding because of the solid waste that they produce. However, the Task Force Gubat sa Baha indicated in a June 2024 interview that most structures along the three-meter easement are commercial and not residential occupants. This partly reveals the privileging of biases against marginalized communities in the city's planning structures which disadvantage the perspectives of those living in informal settler households who are the most vulnerable in flooding disasters not only due to their proximity to hazards but also their socioeconomic precarity.

Further, civil society organizations (CSOs) reported in 2023 that they were consulted only partially and at the last minute. The CPDO only gave the groups a summary of the plan without supporting documents that would have allowed CSOs a clearer basis for their comments and the prospective inclusion of urban risks in planning. For instance, while Cebu City has a "Declaration of Climate Emergency" that commits the city to a just transition framework that potentially situates urban risks in broader adaptation and mitigation strategies, CSOs have no way of knowing and confirming because they were largely excluded from the process of developing the CLUP (No-ot Magsumbol 2023; Caayon 2023). On 21 October 2024, the Pagtambayayong Foundation Inc., which was one of the CSOs who lamented the absence of CSO involvement, disclosed in an interview that they were still not consulted with Cebu City's CLUP. The exclusion of civil society from formal planning structures and frameworks is not new. As Gera (2016) argued, while there is a strong institutional framework for public participation in the Philippines, the terrain of participation remains contingent upon the central state institutions including the arbitrary interests of local chief executives and the local political elite.

Ensuring the participation of affected stakeholders and CSOs ensures that there is co-creation of knowledge and mutual learning in the identification of urban risks, which, in principle, facilitates the codesigning of land use and spatial strategies to reduce them. The value of cocreating land use strategies and the broader responses to urban risks is that they are not bounded by limitations of technical knowledge but encompass a community's histories, social context, and way of life, which are at the forefront of sustainable adaptation and mitigation to climate risks.

# CONCLUSION AND POLICY RECOMMENDATIONS

The dynamics that drive urbanization and climate hazards are transboundary and do not discriminate based on artificial politico-administrative boundaries. Risks and vulnerabilities in urban settings cut across these boundaries and often reproduce uneven development and climate change impacts that disadvantage local governments with lower capacities and marginalized communities that are at the peripheries of urbanity. Metro Cebu, one of the main urban centers and regional hubs in the Philippines, is an amalgamation of uneven and fragmented land whose control and protection are contested by incoherence in the scale of power and dysfunctional jurisdictional mandates. The metropolitan area shares risks and challenges, owing to the integration of populations and natural systems regardless of its borders. In particular, urban flooding is one transboundary risk that severely affects lowland riverine communities through post-disaster displacement or relocation, more mobility concerns in impassable flooded roads, and threats to human life, especially in the case of disaster scenarios.

Despite previous attempts and informal solutions to integrate the land use strategies and responses to these shared risks, urban risk-resilient land use planning remains subject to incoherent scales of power and jurisdictions, horizontal fragmentations within local governments, and a planning milieu that constrains public participation in land use decision making. To address these challenges, this paper recommends the following:

1. Create and institutionalize a multilevel metropolitan planning body. Since targeting reforms toward the Local Government Code of 1991 is an uphill challenge, LGUs in Metro Cebu should institutionalize a multilevel metropolitan planning body to formalize the monthly planners meeting that is already in practice. This special body, however, should include the planning and development office planners of Metro Cebu, disaster risk reduction specialists, and representatives from civil society organizations whose role is to aggregate risk knowledge, perception, and present climate risk adaptation and mitigation practices of communities. Including the local chief executives in the composition of the planning body is not necessary at this level because it would overlap with the functions of the Regional Development Council, which is composed of the chief executives of the LGUs.

2. Include mutual learning and cocreation of responses in current public participation frameworks. To prevent tokenistic and last-minute forms of consultation, provisions for public participation and multi-sectoral representation in city and metropolitan planning should specify mutual learning and the cocreation of interventions to provide a clearer basis for active and substantive forms and degree of public participation that promotes consensus, eases tensions, and even includes considerable influence decision making to operationalize sustainability and social equity in risk-informed land use planning.

3. Develop urban risk-informed land use strategies that address urban informality. Land use strategies should not be solely based on the technical foundations and knowledge that are privileged in the assessment of urban risks. Risk assessments and land use interventions should facilitate long-term transformations and risk-proofing of the sites of urban informality (World Risk Report 2014), where the most vulnerable to climate impacts reside. These transformations include the gradual redevelopment of these sites that are centered on local knowledge and priorities—mindful of the histories and adaptation strategies of "invisible city-dwellers."

While they are shared beyond borders, urban risks are not felt evenly. Land use planning for urban risk governance should center on those in the peripheries of urbanity to substantively meet the standards of inclusion and urban resilience. Urban risk-resilient land use planning, at its core, should not be blind to the systemic inequities that have driven the territorialization of cities and narrow models of development that produced unmanageable urbanization and created uneven geographies that situate the marginalized in a life of risks.

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