

A War for Sustainability?

Intersecting Discourses on Urban Humanity in Gubat sa Baha

*Proceedings on the Lecture-Workshop on Urban Sustainability Policy/
Research and Stocktaking of Policy Initiatives for Cebu City's Urban Risk
Governance: A Roundtable on Inclusive Integrated Flood Risk Mitigation*

21-22 August 2024

Prepared by Jawjaw Loseñada



UNIVERSITY OF THE PHILIPPINES
CENTER FOR
INTEGRATIVE AND
DEVELOPMENT
STUDIES

An aerial photograph of Cebu City, Philippines, featuring a large cable-stayed bridge spanning a body of water. In the foreground, a historic building with a grid-like facade is visible. The image is overlaid with a semi-transparent grey rectangle containing text.

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"Cebu-Cordova Link Expressway (CCLEX)"

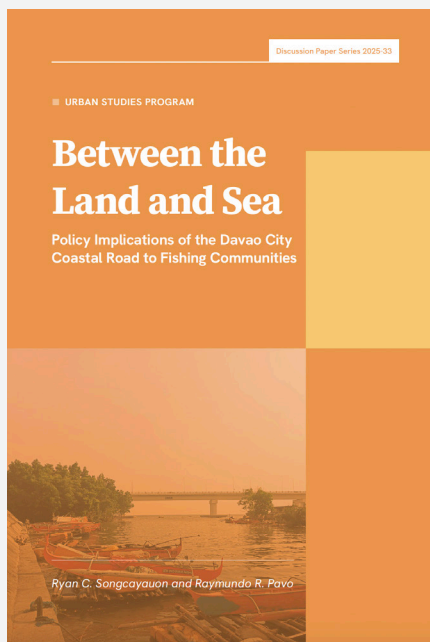
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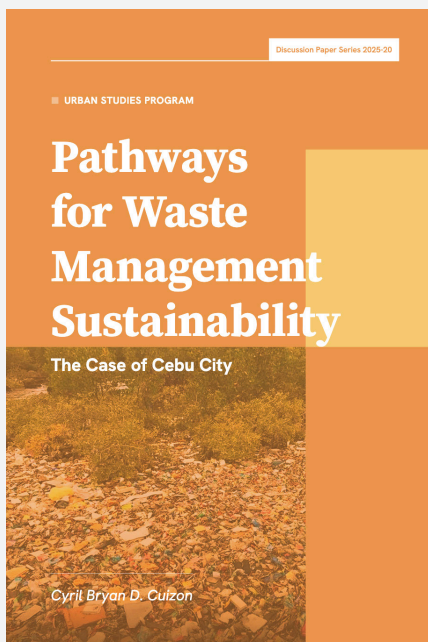
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About the Proceedings

Last August 21, 2024, the UP Cebu team under the Urban Studies Program (USP) conducted a lecture- workshop on urban sustainability research facilitated by experts from the School of Urban and Regional Planning (SURP) of UP Diliman led by Prof. Karen Ann B. Jago-on, with a special keynote presentation by Prof. Dr. Miguel Esteban, of Waseda University in Tokyo, Japan and an established expert on the field of coastal resilience, having published multiple articles in reputable journals worldwide.

Atty. Francis Michael C. Abad, the dean of the College of Social Sciences of UP Cebu, opened the event through his welcoming remarks, while Prof. Rosalie Arcala Hall delivered a message as the UP Center for Integrative and Development Studies (UP CIDS) Executive Director. Atty. Cyril Bryan Cuizon, a project fellow of the UP Cebu team under the Urban Studies Program moderated the event.

The workshop aimed to introduce scholars to various methodologies in urban sustainability research and policy, to hone their skills in writing and presenting complex data into entryways to public policy in the Metro Cebu area. Ultimately, the workshop aimed to train scholars and research staff involved in the project in providing capacity for research with practical value towards evidence-based policy making, and establishing efficient programs that promote strategic foresight, rather than reactionary environmental actions plans for the city of Cebu.

The next day, August 22, 2024, the project held a roundtable discussion (RTD) together with members of the Task Force Gubat sa Baha, members of the affected communities spearheaded by the Pagtambayayong Foundation Inc., and members of various civil society organizations in Cebu City, to discuss the integrated flood management approach of the city led by the Task Force Gubat sa Baha.

The event was officially opened by Atty. Leo B. Malagar, the Chancellor of UP Cebu which was followed by Dr. Weena S. Gera, the program convener for the rationale, and Dr. Rosalie Arcala Hall, for a message from the UP CIDS Executive director. Mx. Jawjaw Loseñada served as the moderator for the

event. In the morning, three keynote presentations served as matterloading for the roundtable discussion that followed. The presentations were delivered by Prof. Karen Ann Jago-on, PhD from the School of Urban and Regional Planning of UP Diliman, which was followed by presentations from the Task Force Gubat sa Baha, and Pagtambayayong Foundation Inc., one of the main leading civil society organizations that are involved in the integrated flood management initiative of the city.

The discussion aimed to examine and understand the plans and current priorities of the Task Force Gubat sa Baha and the governance constraints in implementing the city's integrated flood risk mitigation program, understand the social impact of the city's integrated flood risk mitigation program toward informal settler families and other affected community stakeholders, promote collaboration between government (the Task Force Gubat sa Baha, other units of the Cebu City government, and concerned national government agencies (such as the Department of Public Works and Highways, the Department of Human Settlement and Urban Development, etc.), barangay leaders, civil society organizations, affected local communities, the private sector, and other stakeholders to enhance social inclusion and community participation in the city's integrated flood risk mitigation program, and develop recommendations for policymakers and government agencies in integrated flood risk mitigation and urban risk governance (across intersecting issues of solid waste management, flood and river management, land use management and housing management) that are economically efficient, environmentally sound and socially acceptable and just.

DAY 1

Presentation on Urban Sustainability Research

Karen Ann B. Jago-on, PhD

*Professor, School of Urban and Regional Planning
University of the Philippines Diliman*



■ **Figure 1.** Dr. Karen Ann Jago-on delivers her presentation to the attendees, focusing on urban sustainability governance and urban sustainability research

Dr. Karen Jago-on opened her presentation by providing a foundation for urban sustainability. Urban sustainability refers to meeting the needs of the present without having to compromise the capacity of the future to provide and meet their own needs, applying the broader concept of sustainability in the concept of cities. She underscored the importance of striking the balance

between economic, social, and environmental development in cities, especially in the face of challenges posed by urbanization ranging from environmental decline, increased disaster intensity and risks, and biological risks such as the COVID-19 pandemic, among many others. She continued by highlighting how Cebu, as an urban center, is prone to a number of environmental risks such as worsening flooding due to heavy rainfall, climate-induced changes manifested in changes in weather patterns, droughts, and extreme heat, and at the same time, limited water availability and its consequent water management, among others.

Dr. Jago-on also shared relevant insights from research she conducted probing seven highly urbanized Asian cities, such as Manila, Tokyo, Bangkok, and Jakarta — which were located along the coasts of their respective countries — to provide an account of how urbanization affects subsurface environments, also known as underground environments. What follows are the major key findings from Dr. Jago-on's presentation:

Groundwater Over-extraction

Dr. Jago-on shared the experience of Boracay with its oversupply of hot springs as a tangent of their tourism landscape. She then connected it to the experiences of Calamba, Laguna and Los Banos, both of which also have hot springs as part of their tourism landscapes. Dr. Jago-on explained that for both Calamba and Los Banos, there might be a case of groundwater over-extraction, with overreliance on groundwater, especially for industrial usage, leading to depletion. This results in hot spring resorts in Laguna and Los Banos using artificial means to increase and adjust the temperature of their hot springs to suit the wants of their clients. This is due to the lack of capacity of hot springs to naturally generate sufficient heat.

Land Subsidence

Dr. Jago-on then highlighted another key finding of their research, which indicated land subsidence caused by excessive pumping of groundwater. This significantly reduces the structural integrity of the subsurface, resulting in a gradual subsidence of land in some areas. She cited areas like Caloocan, Malabon, Navotas, and Valenzuela (CAMANAVA) as examples of land subsidence. These areas experienced flooding of significant height, despite little or no rain. This showed that the land gradually sank.

Urban Development and Water Dynamics

Dr. Jago-on also shared that the sources of water contamination include industrial effluents, agricultural runoffs, and leaking septic systems. She then provided that in Cebu, there are concerns about the water quality due to the absence of a centralized wastewater treatment facility and management. She then connected this discussion with present case studies which explain the interaction between surface and groundwater, noting that infrastructure development often undermines the soil's natural ability to absorb water, adding to urban runoff and flooding. She used Jakarta and Metro Manila as examples. According to her, because of the worsening urban development situation, Jakarta had to move its capital. Meanwhile, Metro Manila's experience of unregulated urban expansion has led to almost full urbanization, increasing the risks of flooding and land subsidence.

She then provided examples of other Asian cities' responses to the concern of declining subsurface environment quality, citing Bangkok and Tokyo as case studies. For Bangkok, the city has strengthened its groundwater monitoring systems and imposed stricter regulations on its industrial water use. On the other hand, Tokyo has transitioned to surface water from mere groundwater, after the subsidence that occurred in the 1950s. She contrasted this with the case of Metro Manila, where she cited that it lagged in terms of monitoring and enforcement, especially in the face of increasing subsidence and exacerbated water issues caused by poor waste management.

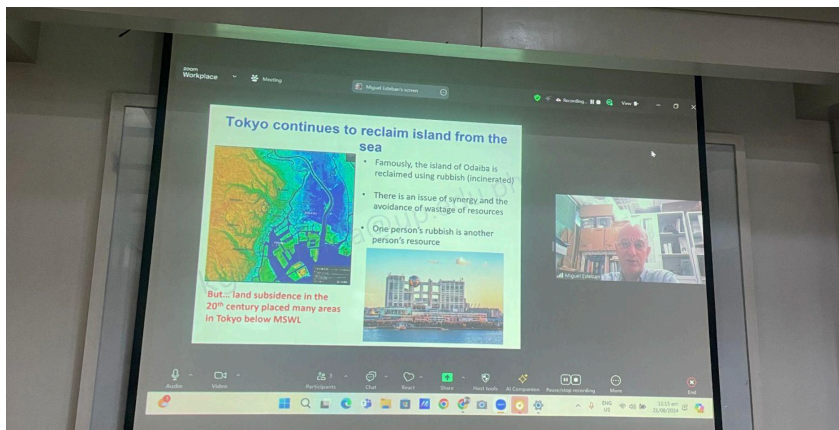
While providing key insights from her research, she also acknowledged that there are challenges in conducting urban sustainability research and policy implementation. As an example, she cited how data can be limited and inconsistently available, affecting the progress of research about groundwater in the long term. She also highlighted that for studies that focus on subsurface environments, an evident challenge is its hidden nature which then makes the monitoring of groundwater difficult.

In terms of policy implementation, Dr. Jago-on cited policy gaps like weak enforcement of water regulations. She closed her presentation by recommending policy interventions moving forward such as strengthening the monitoring systems, providing for a comprehensive data collection for research, promoting integrated urban planning, and lastly, raising

public awareness and engagement. Finally, she wrapped her lecture by emphasizing the importance of sustainable practices, policy interventions, and interdisciplinary research in addressing Cebu's water-related challenges such as water management and flooding.

Miguel Esteban, PhD

Professor, Faculty of Civil and Environmental Engineering



■ **Figure 2.** Dr. Esteban attending via Zoom, delivering his presentation on urban governance and urban sustainability research

Dr. Esteban's presentation highlighted the adaptive strategies of certain cities in response to flooding and subsidence, connecting it with urban planning and the need for social equity. He first presented the case of Tokyo, which faced significant challenges caused by groundwater extraction, leading to land subsidence. He highlighted that many parts in Tokyo, including the likes of Odaib, are examples of land reclamation initiatives, and that in Tokyo, coastal defenses and river levees are provided to protect the city, but a potential breach can end in catastrophic flooding, provided by Tokyo's coastal location. To adapt, the area has then constructed "super levees," which elevated and widened the land behind current dikes, providing pumping stations to manage water levels. He also cited that there are future plans to construct storm surge barriers to help protect against typhoons.

He then cited the case of Jakarta and mentioned how its ground level has sunk by approximately five meters in some areas, with annual subsidence rates that reach 20 centimeters. Because of this, Jakarta has adapted several infrastructure responses to help their experience. One response it took was transforming smaller concrete walls to larger dikes, complemented by sequential elevation of infrastructure, including crucial entryways such as roads and ports. He also mentioned the use of foreign aid, specifically from the Japanese Overseas Development Agency to implement adaptation. Lastly, he highlighted how floating ports can be a potential solution to the problem of rising adaptation costs and cited that there are continuing land reclamation projects despite the above-mentioned challenges.

Dr. Esteban continued by providing adaptation strategies of other major cities around the world, such as Miami in the United States and Ho Chi Minh City in Vietnam, where both utilize elevation strategies for roads and infrastructure, as well as using valves and barriers to prevent seawater intrusion. He also cited Japan's tsunami response by highlighting how towns such as Riikuzentakata, are elevated by up to 15 meters and how tsunami response is a massive investment in Japan which accounts ten percent of their gross domestic product (GDP) into reconstruction.

Dr. Esteban focused on the idea of ports as a site of adaptability, stating the case of how Jakarta's ports are raised in sections and how these could reduce potential costs while providing for long-term solutions. He also highlighted how in Japan, steel piles, among other advanced measures, have become a necessity in ensuring port stability in seismic regions, which then increases the costs.

He called for the need of a multi-layered defense system for flood prone areas, where the first layer is focused on physical barriers, such as dikes and offshore breakwaters, to prevent and hold off flooding. The second layer should be centered on effective land use planning, ensuring critical infrastructure such as hospitals and schools to be located on higher grounds, and lastly, the third layer is focused on evacuation protocols to ensure public safety during extreme events.

Dr. Esteban also presented socio-economic implications of these adaptive strategies which focuses on three aspects: cost, social equity, and collaboration.

He mentioned that adaptation measures are indeed expensive and funded by taxes, raising the question of financial sustainability. As for social equity, he cited how the poorer sector of the population often bear the brunt of the effects and manifestations of climate change, while not having sufficient resources in to effectively adapt. Lastly, he mentioned how sharing knowledge and relevant technologies serve vital roles especially in effective adaptation among cities around the globe.

He closed his lecture by highlighting how major cities like Tokyo and Jakarta are not retreating in terms of rising sea levels, but rather, incrementally adapting given the resources they have. More importantly, he cited that climate change is no longer a distant challenge but a reality that we are living, a reality that necessitates immediate action achieved by collaboration by governments, engineers, and scientists in coming up with cost-effective solutions, centered most importantly on equity.

Open Forum

Atty. Cyril Bryan Cuizon

Moderator

The forum opened with an insight from Dr. Jago-on mentioning how her presentation and Dr. Esteban's lecture shares relevant key findings, to which Dr. Esteban responded by highlighting how important it is to focus on the problems of land subsidence and groundwater obstruction, and discussed the necessity to strike a balance between adaptation costs and mitigation measures.

A question was raised by Xavieur Jamar Plaza, a student researcher, on the applicability of Tokyo's flood model to Cebu City, given its unique geography. To provide more context, the participant noted how flooding in Cebu city is a result of a runoff from the highland to the lowland areas of the city, exacerbated by rapid urbanization, unlike Tokyo's coastal-driven flooding.

Dr. Esteban responded by suggesting the improvement of river systems and highlighted the need for advanced drainage and river defense systems.

Another question was raised by Joemar Yubokme, a fellow student researcher who grounded their inquiry on their current study on resettlement. He asked how river rehabilitation programs tend to raise the concern of potentially displacing families living along the riverbanks in the clearing and rehabilitation processes. Dr. Esteban responded by citing the historical challenges faced by Tokyo and its consequent implementation of socialized housing to relocate the informal settlers. Additionally, he advocated for careful urban planning and providing better housing opportunities for the displaced families.

Continuing the open forum, John Ryan Jacot, a project fellow of the UP Cebu team of the Urban Studies Program, shared his reflection on the political challenges that affect Cebu's flood management efforts. He highlighted that there is indeed a lack of metropolitan governance and political incentives for government units to provide for long-term solutions that can help address the pressing issue faced by the city. He also highlighted and re-echoed how Tokyo's centralized governance contrasts with that of the Philippines and Cebu, resulting in two different approaches and results in flood control and management. As a response, Dr. Esteban acknowledged the complexity in terms of effective policy making and encouraged incremental improvements.

The last question was raised by Dr. Weena S. Gera, the program convenor, on the matter of success stories in terms of policy implementation from research recommendations. Dr. Esteban responded by underscoring the need for incremental improvements in the field of urban planning, stating that meaningful change often happens gradually.

To officially close the open forum, Dr. Esteban called for the need for persistence and incremental progress when facing and addressing urban and environmental challenges. He stated that policymaking should balance scientific insights with practical limitations, targeting steady improvements over immediate and sweeping solutions.

DAY 2

Roundtable Discussion

Morning Session

Dr. Karen Jago-on
Facilitator

The morning session of the stocktaking event and RTD engaged members of affected communities, representatives from both the Task Force Gubat sa Baha, and civil society organizations such as the Ramon Aboitiz Foundation Inc., (RAFI) and the Pagtambayayong Foundation Inc., on a discussion on urban sustainability and disaster risk management in the country, particularly in Cebu City. The session outlined key issues and identified the following urban challenges in the context of Cebu City:

The first point of the discussion was on the issue of flooding, where in the context of Cebu City, such issue is a result of several interrelated factors such as insufficient drainage systems, with some dating back to the 1920s. This proves inadequate for the urban population and the increasing rainfall levels of the present. Another factor discussed was the encroachment of waterways by informal settlements and infrastructure built over natural riverways blocking drainage systems and exacerbating the experienced flooding. Additionally mentioned was how waste accumulation obstructed these drainage systems and reduced the health of these riverways. Urban sprawl and the climate crises were two additional factors that were also brought up during the discussion. It was further noted that expansion to flood-prone areas caused the reduction of natural floodplain capacity and rising sea levels with increasing land subsidence contributed to coastal flooding, even with the absence of rainfall.

Another point that was raised in the morning session was on the solid waste management in Cebu City where improper waste disposal and segregation was identified as a key urban issue in the city, with some participants noting how these improperly segregated and disposed waste contribute to the blocked drainages across the city, exacerbating floods, especially during heavy rainfall.

The next issue focused on housing and informal settlements, especially near the major riverways in the city. A key challenge identified was Cebu City facing a shortage of affordable housing. This caused informal settlers to reside in areas identified as danger zones, placing them at vulnerable positions during disasters.

Climate-related issues such as air pollution and increasing heat levels were also identified., It was highlighted how urban congestion influence city's air quality, compromising public health. In relation to this, participants expressed concerns on the city's heat, prolonged periods of drought, and erratic rainfall patterns, which affect their economic and social productivity. Such effects also have consequences for material sustainability such as water supply in the city.

The discussion also outlined the frameworks and policies grounded on urban sustainability and development. The first tapped into the requirements provided by the Local Government Code of 1991, which mandates all local government units (LGU) to develop both Comprehensive Land Use Plans (CLUPs), and Comprehensive Development Plans (CDPs). The former should focus on identifying proper zoning areas and allocating portions of land for housing, productive, and protected spaces, while the latter must be aimed at addressing social, economic, and environmental aspects of urban development.

The next framework discussed was on the possibility of utilizing a ridge-to-reef approach to manage the interconnected ecosystems, particularly for the context of Cebu City. Such an approach would require forest ecosystems to be situated in the upland areas, while agricultural and urban ecosystems would be situated in the midsections, and finally, coastal and marine ecosystems would be placed in the downstream areas. Such an approach emphasized the importance of proper management, citing that mismanagement can cause further flooding and biodiversity loss.

The third framework highlighted was on disaster risk management, emphasizing how LGUs must assess risks and vulnerabilities, as well as integrate disaster risk management in all development plans to ensure protection against flooding, among other climate-related disasters.

The discussion then forwarded proposed solutions to the issues and challenges presented previously, namely:

- Updating drainage systems and rehabilitate and revive crucial waterways in the city;
- Protecting green spaces and properly managing water flow across ecosystems;
- Relocating informal settlements and enforcing stricter zoning laws;
- Improving waste collection and promoting solid waste management through public awareness campaigns; and
- Engaging stakeholders in urban planning and implementation

Closing her lecture, Dr. Jago-on highlighted how urbanization intersects with climate change. She also underscored the importance of a neutral mediator who can help address fragmented political dynamics and ensure that proposed solutions are grounded on research-based evidence. Finally, she called for a deeper analysis of how social justice frameworks can be integrated into the urban planning policies of Cebu City.

MAYOR GARCIA'S ENGAGEMENT



■ **Figure 3.** Mayor Alvin Garcia engaging with the participants and audience of the event

The session acknowledged the presence of Mayor Raymond Alvin Garcia who engaged and addressed the audience, departing from his prepared speech so that he can provide for an honest and direct account of the current challenges that Cebu City is facing.

He began by acknowledging how flooding is a central issue that the city experiences on a regular occurrence to which he mentioned that the city has hired a consultant who specializes in hydrology to address issue related to drainage systems. He also mentioned how rivers such as the Butuanon and Mahiga rivers are particularly declining in terms of health. He highlighted how the task force conducts weekly meetings with him and his office to ensure accountability and to track the progress of the various initiatives under the task force.

Mayor Garcia mentioned that Cebu City currently has a backlog of at least 20,000 to 40,000 housing units, explaining that the resistance in terms of relocation is due to the residents' preference for central relocations over affordable ones which are in outlying barangays such as Budlann, Binaliw, Pit-os, and Guba. He further noted that many reject medium-rise buildings due to their non-familiarity with such form of accommodation. He then proposed solutions which included building medium rise housings near the city center and highlighted the PAG-IBIG's reduced interest rate, while also encouraging residents to prioritize homeownership especially in the long run.

With regards to this, a participant raised a concern regarding the requirements for joint application for loans amounting to Php 1.2 million, citing financial constraints, to which the Mayor urged the participants to shift their mindset to one that is guided by financial responsibility and to prioritize shelter as a necessity.

His speech also touched on water resources and solid waste management where he explained that over 90 percent of rainwater flows directly into the open sea due to the lack of impounding facilities, where the likes of Buhisan Dam, built in the 1960s, is inadequate. Some proposed actions on this include constructing gabion dams or mini-dams in mountain barangays and to seek private partnerships to alleviate budgetary constraints felt by the city government. He also urged the participants to help strengthen public education on proper waste segregation, as well as to instill discipline in disposing daily waste, and to draw inspiration from other developed countries with successful waste management systems.

Lastly, he stressed his style of governance rooted on an approach-oriented approach which focuses on having weekly deliverables and constant evaluation of the progress of the task force. He contrasted this with the management styles of the city's previous mayors, underscoring accountability and persistence in addressing social issues. He also urged everyone present to work alongside the government, given the limited resources, and encouraged the private sector to innovate and invest in areas such as dam construction and urban planning. Ending his speech, he reiterated the importance for residents to adopt a solution-based perspective and personal discipline.

STAKEHOLDER ENGAGEMENT AND PRESENTATIONS

After the mayor engaged with the participants, the various invited stakeholders were given time to introduce themselves and engage with the other stakeholders present in the event. The first one to present was the Pagtambayayong Foundation Inc., who invited community leaders to share their experiences and insights with regards to the integrated flood mitigation program of the city.

Gemma Rosacena, an urban poor leader, shared her experience of being one of the affected residents of a demolition project back in 2011, following a severe flood incident involving SM City Cebu, and shared that the residents were blamed for the flooding. However, she added that the flooding continued even after their settlements have been demolished. The second speaker was Jun, a resident of Duljo-Fatima, Cebu City who shared his experience of being forcibly evicted back in 2021, and mentioned the financial burden of renting temporary housing while at the same time, having to support his children and their education. The third speaker was Helen from the Labangon Riverside who shared about her community's pending demolition, and even compared the treatment of informal settlers to garbage management, noting the disparity in terms of attending and prioritizing to the welfare of the residents. The last speaker from Pagtambayayong Foundation Inc. highlighted how informal settlers are also victims of systemic urban and environmental issues, and that their rights for better settlement are provided for by Philippine law.

Common among the speakers from Pagtambayayong Foundation Inc., is the call for better relocation for their families, citing their rights for decent housing, and the demand for solutions that also consider providing support for their livelihood.

The next presentation was given by the Task Force Gubat sa Baha through Ret. Col. Jefferson Omandam. He began his presentation by contextualizing the creation of the task force through the Executive Order No.2 in 2022, with the goal of restoring Cebu's natural riverways to help mitigate flooding caused by the urban sprawl in the city. He mentioned that the task force is divided into two command centers: the North and South District Commands, led by Gen. Aderson Comar and Col. Omandam, respectively. He then shared on the achievements of the task force so far, stating that they have cleared the structures within the defined three-meter easement zones along Estero de Parian, and that they have also conducted profiling of over 5,000 informal settler families and 215 business establishments to ensure that they comply and that they are ready for relocation.

He then discussed on the key engineering and infrastructure solutions adapted by the city government, some of which include:

- Clearing old drainage systems in Colon, Banilad, Talamban, Pardo, etc., and proposed new drainage systems to complement existing structures;
- Constructing mini-dams in Pardo, Talamban, and Sirao to help manage water flow, and;
- Enforce water tank requirements for residential and commercial use, as well raise public awareness in waste segregation and recycling.

During their presentation, some participants were given time to share their feedback and testimonies. One of which was from a reporter from The Freeman who highlighted how the news outlet complied with the easement regulations, which might serve as an example for other organizations whose buildings are within the declared easement zones.

Closing his presentation, Col. Omandam assured the residents that demolitions will not proceed unless there is adequate relocation in compliance with the Urban Development and Housing Act, and noted the importance of sustaining clean and cleared waterways through security, sanitation, and education.

Afternoon Session

Dr. Weena S. Gera
Facilitator

The afternoon session of the roundtable discussion was participated by members and representatives from the Task Force Gubat sa Baha, Ramon Aboitiz Foundation Inc., Pagtambayayong Foundation Inc., and members of the affected communities, as well as members from the academe.

HOUSING FOR ISFS AND RELOCATION SITES

The discussion began with a sentiment from a representative of Pagtambayayong Foundation Inc., who stated that a major concern they have is about the demolitions that occurred without providing for proper relocation plans. The representative cited how she was affected by the Mahiga Creek demolition back in 2011, which turned their former settlement into a plaza and left the affected residents unsupported. They also suggested relocation sites that integrate residential and livelihood spaces, which must be equipped with important social services such as transportation, public markets, and water systems. They also asked if it would be possible to build these new settlements near their former settlements to address concerns of risks of being far from their sources of livelihood. Furthermore, members of the affected communities also expressed their concerns about having medium rise buildings that are more than five floors stating that such would require elevators and, bigger risk of fire incidents.

As a response, members of the Task Force Gubat sa Baha shared that there are already plans to provide housing initiatives by transforming the allocated city-owned lots, citing areas like Taboan and near the Cebu City Sports Complex as potential sites for these medium rise buildings. They also highlighted that these medium rise buildings were proposed with the idea that the lower floors will be utilized for the provision of social services such as markets and businesses, while the upper floors will serve as residential units. Upon talks with the Department for the Welfare of the Urban Poor (DWUP), the task force also highlighted that the plans as to how these buildings will be

utilized is still dynamic with some of the plans incorporating leisure areas at the topmost floors to maximize functionality and land use. As for the concern of the residents regarding medium rise buildings and their safety, the task force responded by mentioning that while the other proposed suggestion of constructing two-story houses would be ideal, it would be both hard and costly, given the price of land, therefore they see it fit to provide for medium rise buildings instead. This way, both the basic needs of the residents and adherence to land use policies, as well as the mandate of the task force, will be met.

RIVER REHABILITATION AND INTEGRATED FLOOD MITIGATION

The discussion then moved over to the point raised by the task force citing that encroachments and settlements near the eight major riverways in Cebu City is a key contributor to the worsening flooding experienced in the city. Members from Pagtambayong Foundation Inc., then responded by asking how these areas could possibly be cleared and at the same time, the affected families will be supported. The discussion also raised concerns on long term environmental considerations, particularly on restoring water flows around the city and mitigating the worsening urban sprawl experienced in Cebu City.

First, the task force responded by reiterating the need to reinforce the legal requirement that necessitate clearing the three-meter easement zones from both sides of the rivers, which must be free from any form of structures and obstructions to allow the natural flow of water. They also mentioned that part of the restoration plans of these riverways is to transform the riverbanks into parks and walkable pathways which are designed to be both recreational and ecological, highlighting that these areas can become new community spaces which includes “Instagram-worthy” boardwalks and jogging paths.

The representative of the Ramon Aboitiz Foundation Inc., then proposed nature-based solutions that are grounded on blue-green design.

WASTE MANAGEMENT

The next point raised in the discussion was on waste management and sustainability in Cebu City. Some representatives from the Pagtambayong

Foundation Inc. cited that their area in Cogon Pardo receives the disposed waste from nearby barangays and that there are indeed inefficiencies in terms of waste collection, especially in riverways which worsen the flooding in the city. Members of Pagtambayayong Foundation Inc., then shared their experience that in Cogon Pardo, they have practiced urban gardening using compost waste and converted plastics, as well as planting mangroves to help sanitize the waterways near their settlements. This was after they have cited that their waterways were abundant in terms of aquatic life until the reclamation project at the South Road Properties affected the water quality. This consequently affected their sources of livelihood.

The representative of RAFI also highlighted and responded by mentioning community-driven waste initiatives, which include small grants for waste segregation projects, and encouraged the other participants to check with RAFI on how much the specific budget or funding would be.

Furthermore, a participant suggested doing waste analysis and characterization study (WACS) to help understand waste composition and help inform potential solutions. However, it was underscored that in doing these, closing collaboration with the private sector is imperative.

ECOSYSTEM RESTORATION

Another important discussion in the roundtable was on ecosystem restoration, specifically mentioned by the representative of the Ramon Aboitiz Foundation Inc., where Cebu's forest cover is now reduced to less than two percent of its land area. This exacerbates the problem of flooding in the city and creates a need to center solutions on ecosystem-based frameworks that consider infrastructure made not only to the benefit of human beings, but also to the living flora and fauna. They also highlighted how Cebu had a lot of ecosystems before the rapid urban sprawl which affected the quality and health of these ecosystems.

RAFI then highlighted how some of their initiatives are focused on restoring and rehabilitating green spaces in Cebu, to which other attendees added that in these efforts to restore ecosystems in Cebu City in the face of rapid urbanization, stakeholder engagement which pools together the private sector and civil society is important. RAFI also underscored the importance of

including “informal sectors” in these collaborations given their contribution to the country's gross domestic product (GDP).

PROPER ENFORCEMENT AND AWARENESS RAISING

Another key discussion during the roundtable was on the enforcement of environmental regulations, specifically on the barangay level, which was considered weak, and was being attributed to familiarity biases and a certain lack of political will. A suggestion was then raised stating that maybe barangay environment officers could be arranged on a rotational basis, to improve the awareness of the community and strengthen compliance to environmental regulations. Another suggestion was forwarded that maybe neighboring barangays can reprimand and sanction violators from other barangays to strengthen enforcement.

As a response, other participants shared the same sentiment of rotating officers between barangays which would be aimed at mitigating biases and possible conflicts of interests, and that they identified deputized city officers as impartial enforcers. However, they had reservations on the second suggestion of having a barangay sanction violators from another barangay, citing jurisdictional concerns. They also forwarded using educational campaigns to inform communities about pertinent laws on waste management and environmental protection.

FUNDING AND POLICY INNOVATIONS

A key concern was also raised on limited government funding for environmental and housing initiatives which prevents the full realization of the program's sustainability. Proposals such as introducing ecosystem service fees, among other funding mechanisms, were suggested to secure continued financing.

The participants then discussed ecosystem service fees, such as fees for water extraction or pollution, and environmental tax fee for electrical consumption, especially for major businesses with high resource utilization. These fees would then be allocated to trust funds which insulates the programs amidst possible political shifts and changes.

COMMUNITY LED RESPONSE AND HISTORICAL AND CULTURAL PRESERVATION

Another crucial point raised during the roundtable discussion was on community-led responses and the concern on historical and cultural preservation. Suggestions of transforming plastic waste, through using fiberboards or concrete blocks, were raised as potential solutions to the worsening waste problem in Cebu City. Another suggestion was made which encouraged pilot projects for garbage to energy initiatives which would encourage proper waste segregation and generate economic and environmental gains.

A concern on the historical significance of the Estero de Parian was also highlighted during the discussion, where they cited its role in Cebu City's history. The need to restore it to its original state was identified as a top priority, citing the encroachments made and potential loss of cultural heritage due to the river's declining health. To this, the task force shared their plans for the river to be cleared of any structure which would expedite its transformation into a "canal reminiscent of that of Venice" which aims to meet ecological restoration with cultural preservation. However, they mentioned that in doing this, property owners and businesses that are within the easement zones of the river should be highly encouraged to cooperate with the regulations provided by the city to ensure that the project becomes a success.

MOVING FORWARD: WHAT NOW?

As the roundtable discussion closes, the participants expressed their shared commitment to the following proposed outcomes:

- To conduct further studies and in-depth research such as the above mentioned WACS and feasibility assessments, that policymakers can use to inform the city's public policy landscape;
- To cultivate an inclusive culture of multi-sectoral collaborations in order to carry out the proposed solutions efficiently and effectively; and lastly;
- To schedule follow-up sessions similar to the conducted roundtable discussion in order to sustain the momentum and to ensure accountability in terms of the raised concerns and issues.

Mr. John Ryan M. Jacot and Atty. Cyril Bryan D. Cuizon then delivered the synthesis and closing remarks for the stocktaking event respectively, both calling for collaboration and accountability to ensure that sustainability in our urban spaces becomes a reality shared both by the present and future generations.

CENTER FOR INTEGRATIVE AND DEVELOPMENT STUDIES

Established in 1985 by University of the Philippines (UP) President Edgardo J. Angara, the UP Center for Integrative and Development Studies (UP CIDS) is the policy research unit of the University that connects disciplines and scholars across the several units of the UP System. It is mandated to encourage collaborative and rigorous research addressing issues of national significance by supporting scholars and securing funding, enabling them to produce outputs and recommendations for public policy.

The UP CIDS currently has twelve research programs that are clustered under the areas of education and capacity building, development, and social, political, and cultural studies. It publishes policy briefs, monographs, webinar/conference/forum proceedings, and the Philippine Journal for Public Policy, all of which can be downloaded free from the UP CIDS website.

THE PROGRAM

The thrust of the **Urban Studies Program** is to bring to the fore the critical issues around urbanization and urban humanity in the policy discourses for the country. It brings together studies on cities especially with acute vulnerabilities such as coastal cities across the Philippines that directly respond to emerging concerns on urbanism with a specific lens on inclusive and just resilience framework. It highlights the uneven impacts of disasters and adaptation mechanisms, and the often ignored tensions and fragmentations between technocratic infrastructure solutions and community deliberations and perspectives, especially in the strategic allocation of resources, infrastructure, and services to not only optimize space and reinforce infrastructures but also to ensure the well-being of residents and avoid displacements while rehabilitating and promoting the environment. It aims to revisit and take stock on the intersections between underdeveloped institutions and human resources for urban planning, the political dynamics anchored on territorial scales and jurisdictions of accountability in the context of metropolitanization and urban agglomeration, and the fundamental questions of cultural identity, citizenship, and solidarity in urban communities for resilience.

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