Urban waterfronts as Wetland Learning Centres – The story of the Las Piñas – Parañaque Critical Habitat and Ecotourism Area

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[1]Society for the Conservation of Philippine Wetlands, Inc.

Urban waterfronts as Wetland Learning Centres – The story of the Las Piñas – Parañaque Critical Habitat and Ecotourism Area

- Introduction
- Transitions in Urban Waterfronts
- Wetland Learning Centres
- Public Spaces, Learning Spaces, Learning Landscapes
- Synergies and Opportunities
- Manila Bay: LPPCHEA
- The future of Manila's Urban Waterfront

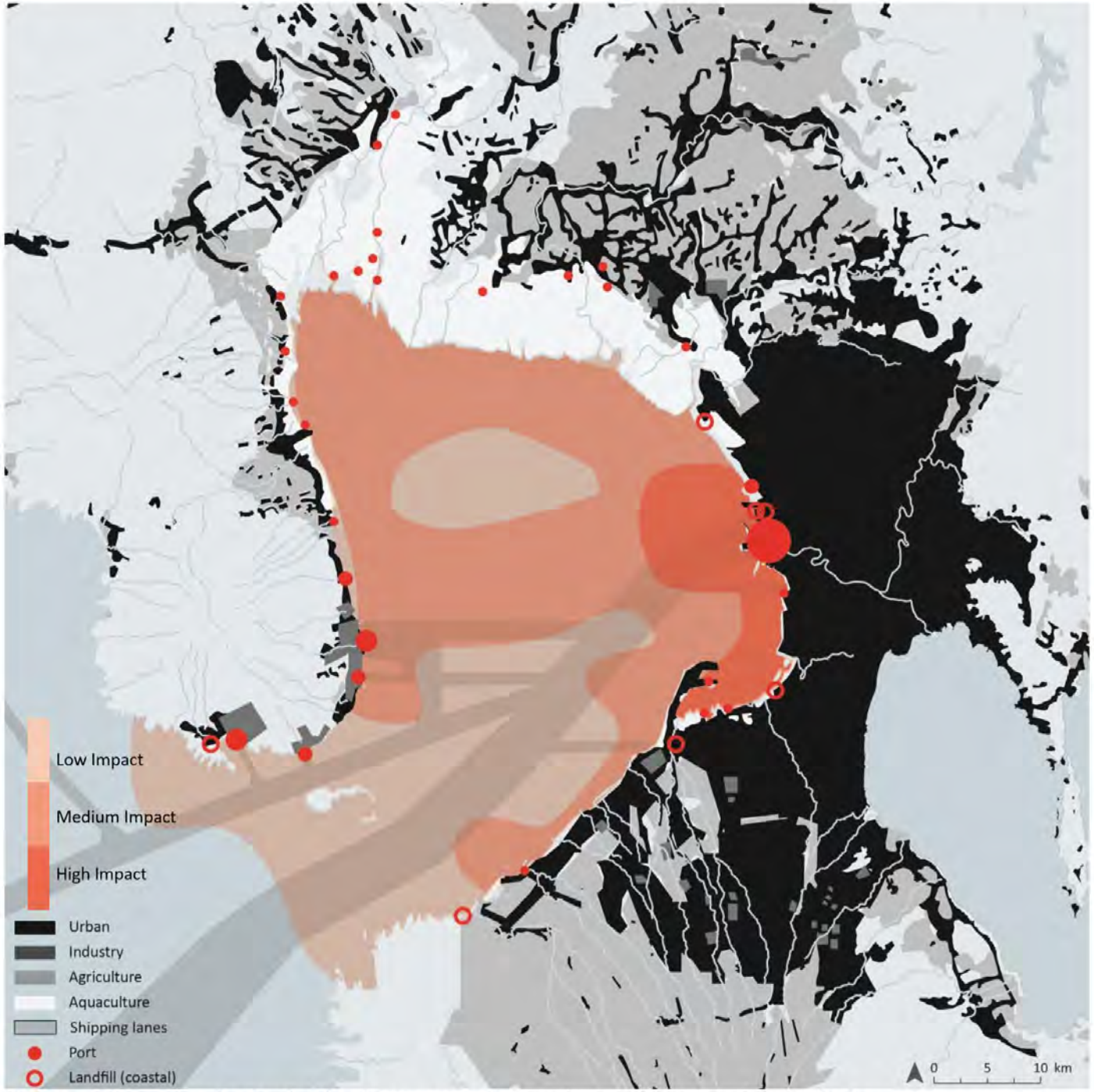


Figure 5.13. Levels of urbanization impacts on the marine environment in Manila Bay

Urbanisation has contributed to the decline of mangroves around Manila Bay, from 54,000 ha mangrove cover in 1890, down to 794 ha in 1995 (Jacinto et al, 2006b), and finally down to 414.15 ha by 2005 (PEMSEA, 2007).

mangroves, coral reefs and seagrass beds are habitats which promote high levels of biodiversity in both coastal and marine ecosystems.

Beykan, Naz. Marine Footprint: Urban Impacts on Marine Ecosystems in Manila Bay. Masters Thesis, Harvard Graduate School of Design (Master in Design Studies). May 2013.


CUT
YOUR
GREED!
NOT
OUR
TREES


MSN


Philippine Star

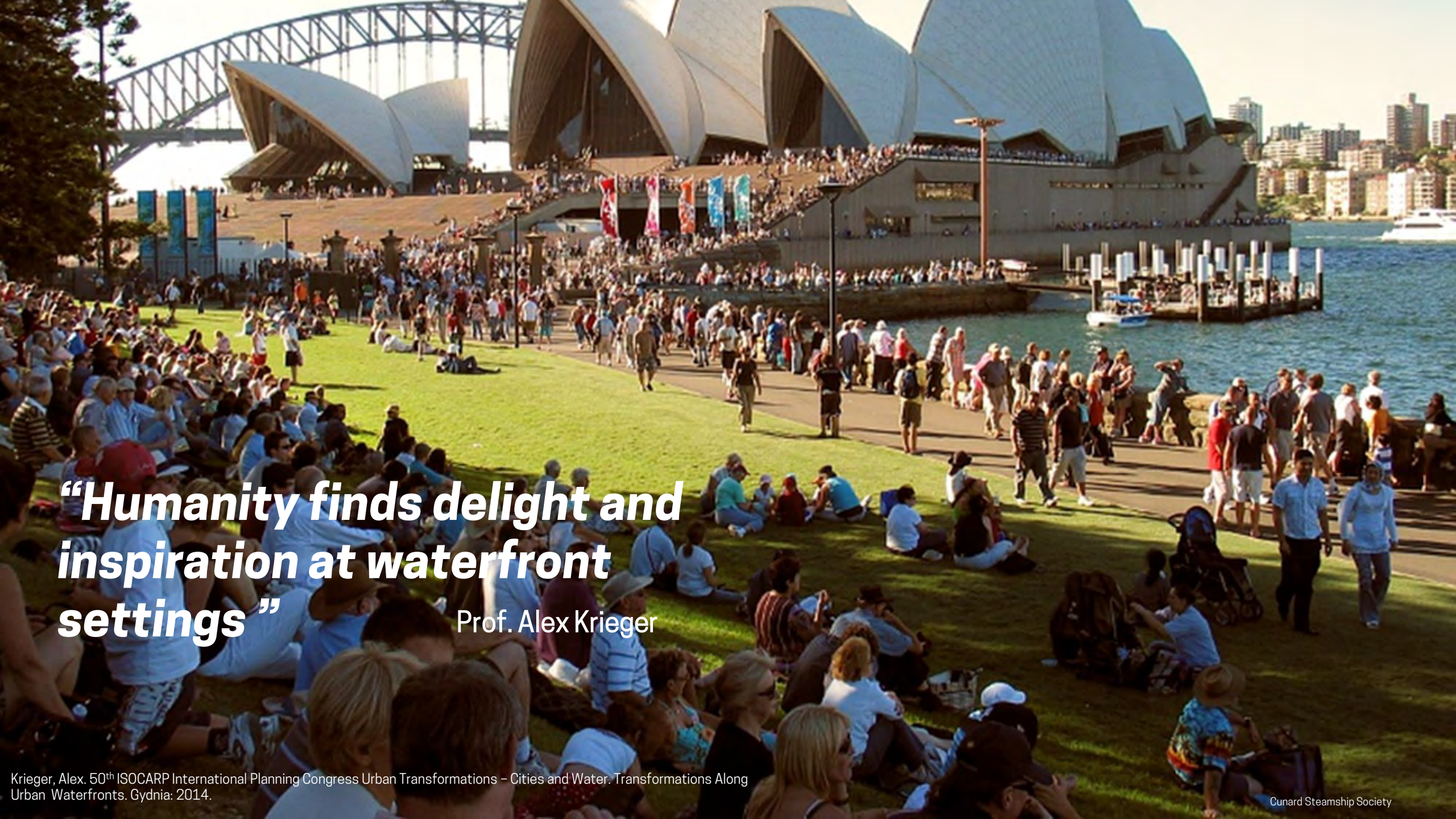
Visitphilly.com Benjamin Franklin Bridge, Race Street Pier

“The waterfront isn’t just something unto itself. It’s connected to everything else”

Jane Jacobs

AnikaSkywalker CC Creative Commons

PxBay CCO Creative Commons



"Humanity finds delight and inspiration at waterfront settings "

Prof. Alex Krieger

Krieger, Alex. 50th ISOCARP International Planning Congress Urban Transformations – Cities and Water. Transformations Along Urban Waterfronts. Gydnia: 2014.

Cunard Steamship Society

Distinctive Settings at Water's Edge Provide Significant Advantages for a City's Competitiveness in the Global Economy

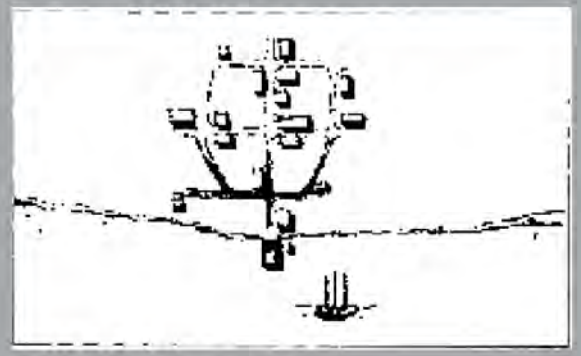
Prof. Alex Krieger

Michael Coldwater, Pinterest.

What are Urban Waterfronts?

- Urban water fronts have typically been sites of heavy development and often are sites of pollution or exclusive access (The Nature of Cities, 2015).
- A dynamic setting taking place in an edge environment with overlapping communities and dramatically different conditions, full of complexity and energy (Seattle Open Space, 2006).
- An interface of aquatic and terrestrial, the site of complex intertidal communities, the point of release for wave action, and the vehicle for many dispersal patterns (Seattle Open Space, 2006).
- Evolving from its industrial past as a city's service yard, the urban waterfront has in recent decades become hybrid spaces of transition (World Bank, 2017).

Pattern of Waterfront Development



SETTLEMENT

A port settlement is established in a safe harbor; inhabitants have direct contact with the natural shoreline.

A PORT IS ESTBLISHED

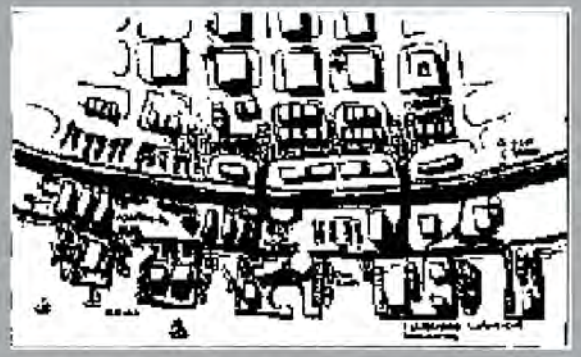
The settlement becomes a city with a port authority; docks made of stone and fill replace wood structures.

CITY DETACHES

As commerce and shipping expand and industrialize in nature, the distance between the shoreline and the city center increases significantly.

DECLINE

As shipping decreases, or larger facilities are developed elsewhere to accomodate large modern ships, the original shoreline is abandoned.



REDISCOVERY

Redevelopment spearheaded by the city's redevelopment agency brings about environmental clean up and reconnects the city to its waterfront

Remaking the Waterfront, ULI

Challenges to Urban Waterfront Planning [1] (Krieger, 2014)

1. Transformations along urban waterfronts are a recurring condition in the life of a city and tends to take place during times of economic and cultural shifts
2. Along the waterfronts of cities worldwide the human instinct to both preserve and to reinvent are robustly acted out.
3. The public increasingly desires and expects access to the waterfront. This usually requires overcoming historic barriers: physical, proprietary and psychological.
4. Maintaining Linear Public Connectivity while emphasizing the Perpendiculars from the City Fabric to the River
5. Waterfront redevelopments are long-term projects with long-term value to be gained. Endangering this for short-term riches rarely produce the most desirable results.

Krieger, Alex. 50th ISOCARP International Planning Congress Urban Transformations – Cities and Water. Transformations Along Urban Waterfronts. Gydnia: 2014.

Challenges to Urban Waterfront Planning [2] (Krieger, 2014)

6. Wise waterfront planning seeks to unravel unnecessarily polarized visions, and proceeds at two scales: that of the corridor-wide watershed, and that of the strategic [catalytic] project.
7. To make [water]fronts come alive they must become desireable places for dwelling not just to visit and enjoy.
8. The success and appeal of landside development is intrinsically tied to the success and appeal of adjacent water uses.
9. A city's waterfront is its umbilical cord to nature, to the salutary affects of natural beauty, and thus demands intelligent environmental stewardship.
10. A city's waterfront is the setting that provides the best antidote to homogenization or generic urban development

Krieger, Alex. 50th ISOCARP International Planning Congress Urban Transformations – Cities and Water. Transformations Along Urban Waterfronts. Gydnia: 2014.

Ramsar and CEPA (Communication, Education, Participation, and Awareness)

- Wetland Education Centres are recognised by Ramsar in promoting principles of wetland conservation and wise use through the CEPA Programme.
- Other CEPA tools include Communication Techniques, Communication using Wetland Education Centres, Participatory Techniques and Capacity Building, and Environmental Education and Education for Sustainability
- 'hardware' and 'software' for CEPA

Ramsar Convention. Wetland CEPA Methods. https://www.ramsar.org/activity/wetlands-cepa-methods

What is a wetland centre or wetland education centre?

A wetland centre or wetland education centre or wetland learning centre is **any place where there is interaction between people and wildlife** and CEPA activity occurs in support of wetland conservation

WLI – the global network of wetland centres

Traditionally, it is comprised of the following:

- a wetland site with associated interpretative signage, trails, exhibitory, and
- a dedicated visitor centre building that tells stories about wetlands (including the specific wetland in question), their biodiversity and conservation.

Ramsar Convention. CEPA Programme.

Other configurations

- collection, garden museum, science centre and cultural heritage site, or any combination thereof.
- may be important wildlife and landscape features as part of the integrated management of urban water catchments.
- They range from centres attached to particular sites to buildings that tell stories about entire urban water catchments, river basins, or appropriate whole landscape/ecosystem approaches to wetland conservation

Other configurations

- They are inclusive and offer access to all.
- They offer exposure to real life in safe surroundings.
- *This is vital where people are increasingly alienated from nature through prescriptive school based-curricula, health and safety fears, litigious societies, and the dominance of virtual media.*

There are many wetland centres worldwide. Between them they offer:

- Amazing natural and cultural havens as wildlife and heritage spectacles, landscape features, conservation/sustainability/wise use centres, visitor attractions and ecotourism venues operated as sites of public learning, access to green space, and biodiversity/heritage conservation.
- A sense of place and resulting connection to nature.
- Opportunities for Out-of-Classroom learning for schools.

Wetland centres are prime vehicles for raising awareness, focusing experience and catalysing environmental action on behalf of wetlands.

Ramsar Convention. CEPA Programme.

There's a whole range of models all over the world –

Embryonic, community led initiatives

(example – Lagos, Nigeria)

to high-tech, multi-media interactive exhibits in Hong Kong's International Wetland Park.

Ramsar Convention. CEPA Programme.

Wetland Education Centres and Landscape Learning Spaces

- Waterfront development as a public space
- Public space as a learning landscape
- The importance of science in environmental education (Hudson, 2001)
- Outdoor education must provide spaces for the lifestyles of urban families (Hudson, 2001)
- Active learning spaces (technology) can be integrated to engage and facilitate learning (i.e. activity-based GPS enabled gamified learning models, 'Pokemon'). (Gordy, 2018; Hudson, 2001)
- Focusing on the sense of hope and gratification from nature and not the psychology of despair (Hudson, 2001).

Hudson, Stewart. Challenges for Environmental Education: Issues and Ideas for the 21st Century. BioScience. 51:4. Meriden: 2001.
Gordy et al. Interdisciplinary Education and Psychology. 2018, 2(1):3.

Transitioning Urban Waterfronts to allow Learning Spaces

- **Land assembly –** one of the most challenging tasks, mainly due to the fragmented nature of the land ownership, land release mechanisms, and lengthy processes
- **Long-term planning vs. short-termism** – It is important to take a long-term view on how waterfronts can add to and be integrated as part of the existing city.
- **Environmental remediation** – In many cases, cleaning the water and surrounding area requires a tremendous amount of effort often involving multiple agencies, and strong public awareness. Very often this is one of the first few necessary steps before any ambitious development plans can take off.
- **Financial viability** – a major bottleneck due to weak revenue streams and a lack of value capture mechanisms; however, abandoned waterfront areas such as disused port areas can be opportunities for regeneration because of its depressed value.
- **Regulatory and institutional gaps** – related to urban waterfront management and design guidelines, which present challenges in multi-agency collaboration.

Fen Wei, et al. Transforming Urban Waterfronts, Sustainable Cities, The World Bank. 2017.
Amirtahmasebi, Rana, et al. Regenerating Urban Land: A Practitioner's Guide to Leveraging Private Investment. The World Bank Group. Washington, D.C. 2016.

What do successful waterfronts around the world have in common

- ***City leadership is pivotal to enabling transformation.*** To transform underutilized urban waterfront, it calls for extraordinary vision, strong political will, and civic creativity by communities, NGOs, policy think-tanks, etc.
- ***People-centered planning and community engagement is critical.*** There is a variety of ways in which such engagements can be effectively managed.

Times of India

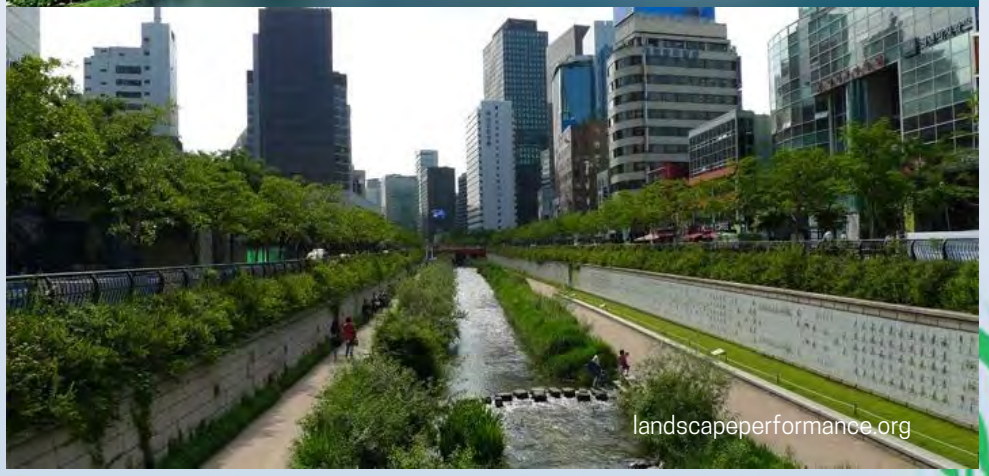
Vietnam Travel Guide

Fen Wei, et al. Transforming Urban Waterfronts, Sustainable Cities, The World Bank. 2017.

What do successful waterfronts around the world have in common

- **Leveraging public assets to finance development is the key**.
- **Development and conservation must go hand in hand.** Tension between development and cultural heritage conversation, as well as minimizing the negative impacts on the environment.


Marina Bay Sands


landscapeperformance.org

Fen Wei, et al. Transforming Urban Waterfronts, Sustainable Cities, The World Bank. 2017.

Brooklyn Bridge Park, New York

- Tough, modest, inventive, the park is located in an amazing physical setting near historic landmarks.
- Climate-specific design extricably linked to the history of the place.
- Dedicated in Spring 2010 to a design by Michael Van Valkenburgh replacing a 85-acre abandoned shipping complex and reconnects the waterfront to the neighbourhood once disconnected by the Queens Expressway.
- The design includes a tidal spiral, ampitheater, swing valley, water playgrounds, restored historic Tobacco Warehouse, beaches, coves, and restored wetlands.

Perkins+Will. Two Stunning Examples Of Urban Waterfront Renewal. FastCompany. 2011.

Gerry Ng, 2017

Diana Baggott, 2017

Saidur Rahman, 2017

Antonio Gil, 2017

Brooklyn Bridge Park, New York

- BBP uses repurposed granite, pine, and industrial landscape fencing, recalling the historic activities of the site.
- Planting is coastal, seasonal, and indigenous (rugosa roses, hydrangeas, oak, catalpa and beetlebung or tupelo trees).
- BBP juts out perpendicular to the New York Harbor along 6 piers; the design is intimate, perfectly capturing the energy and vigour of layers of cultural landscape of the Atlantic and New York.
- BBP is part of a long development of waterfront parks along NY's urban coast, culminating in a water-based approach waterfront plan for NYC's 520 miles of shoreline; others include NY's Dryline Flood Defence.

Perkins+Will. Two Stunning Examples Of Urban Waterfront Renewal. FastCompany. 2011.


TIVE
ACTIVE LEARNING
SPACE
DEPLOYS IN
STORM EVENT

HUNTER'S POINT SOUTH CONCEPT DESIGN June 2009

Krieger, Alex. 50th ISOCARP International Planning Congress Urban Transformations – Cities and Water. Transformations Along Urban Waterfronts. Gydnia: 2014.

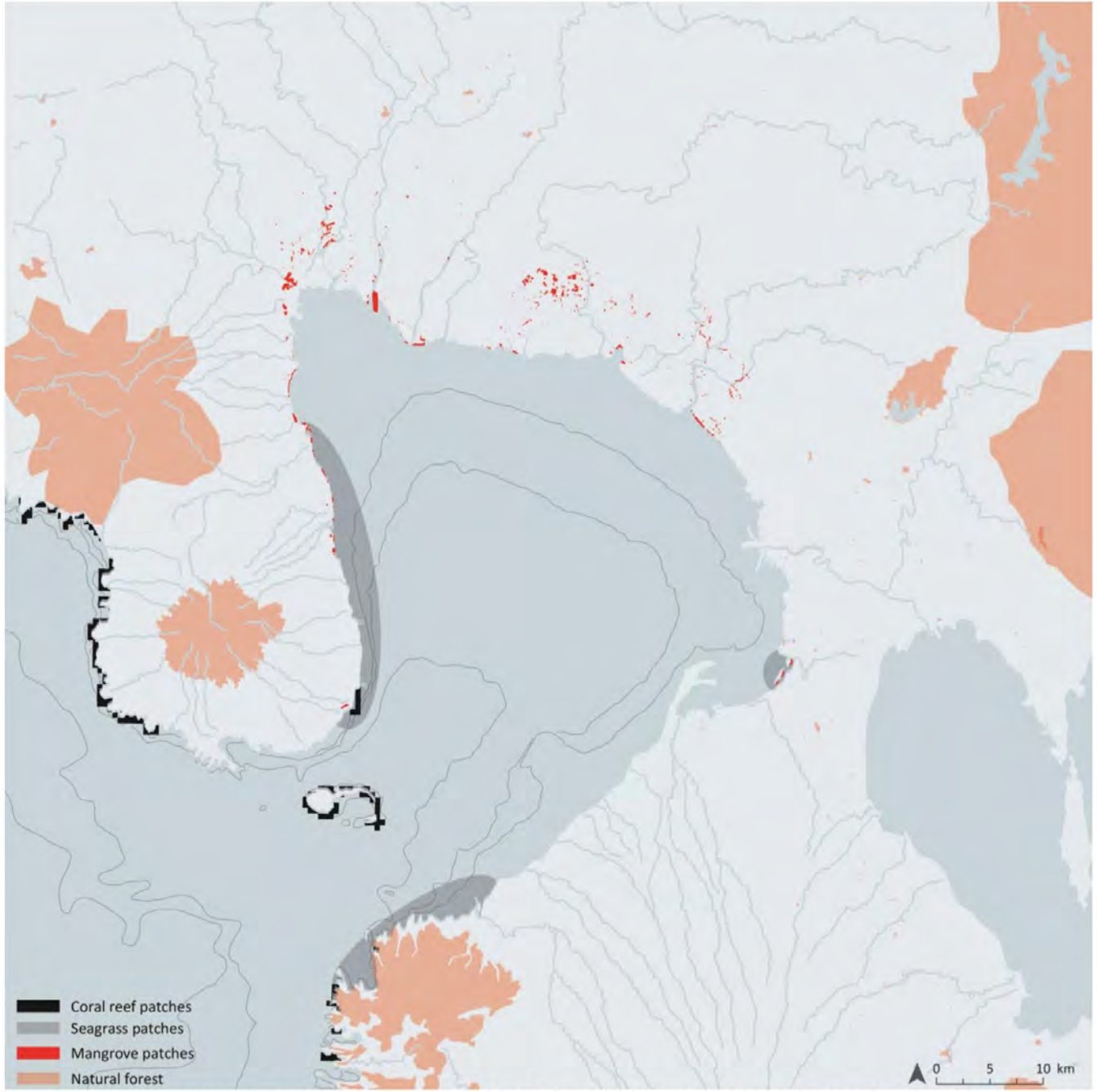
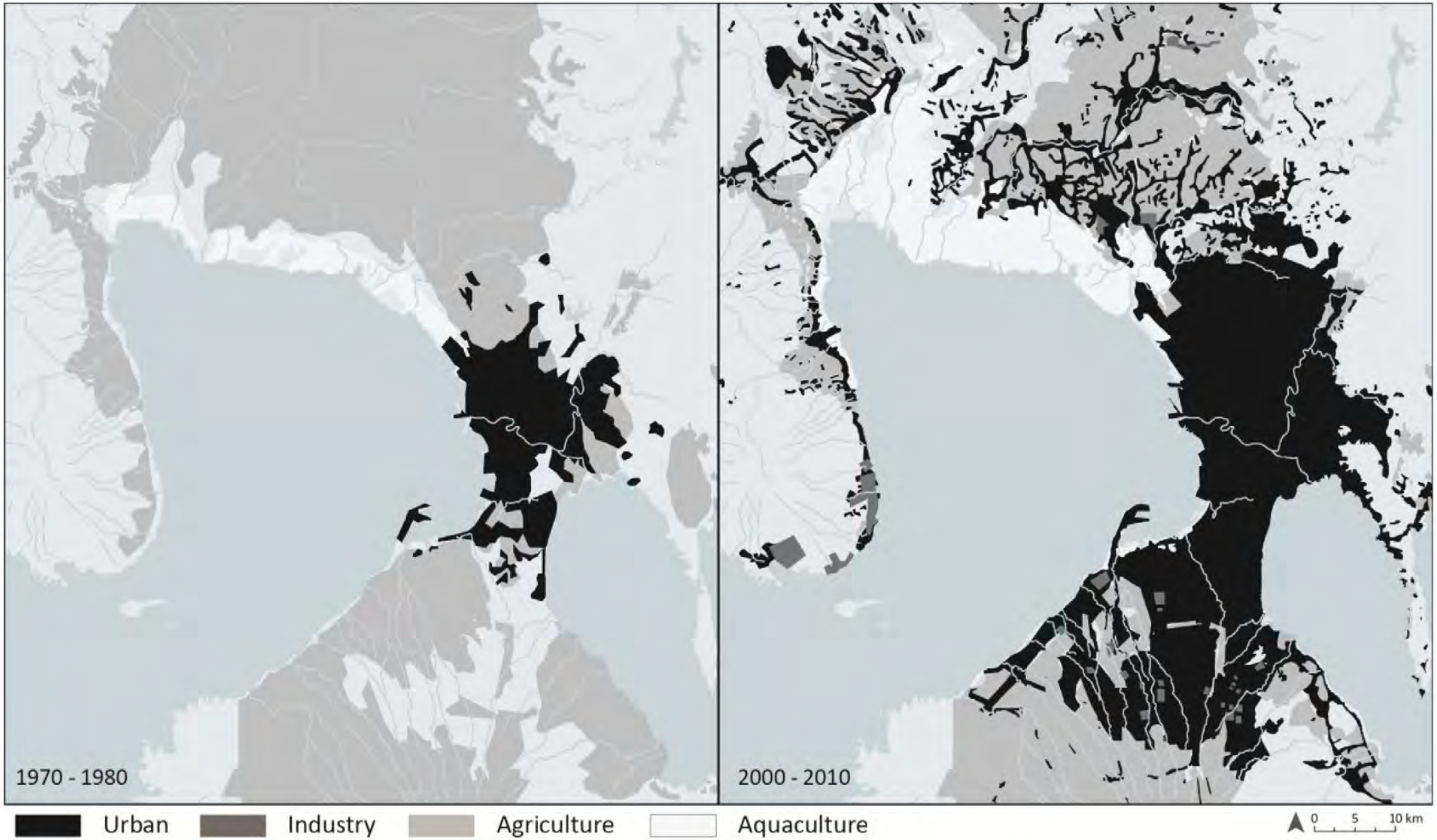


Figure 5.2. Locations of remaining coastal habitats in Manila Bay *(Adapted from WRI, 2011; PEMSEA, 2004; PEMSEA, 2007; Long and Giri, 2011)*

Beykan, Naz. Marine Footprint: Urban Impacts on Marine Ecosystems in Manila Bay. Masters Thesis, Harvard Graduate School of Design (Master in Design Studies). May 2013.



Note: The data for 1970-1980 period did not incorporate scattered urban uses and industrial areas. Agriculture refers to rice paddies and plantations. Aquaculture refers to fishponds and shrimp farms.

Beykan, Naz. Marine Footprint: Urban Impacts on Marine Ecosystems in Manila Bay. Masters Thesis, Harvard Graduate School of Design (Master in Design Studies). May 2013.

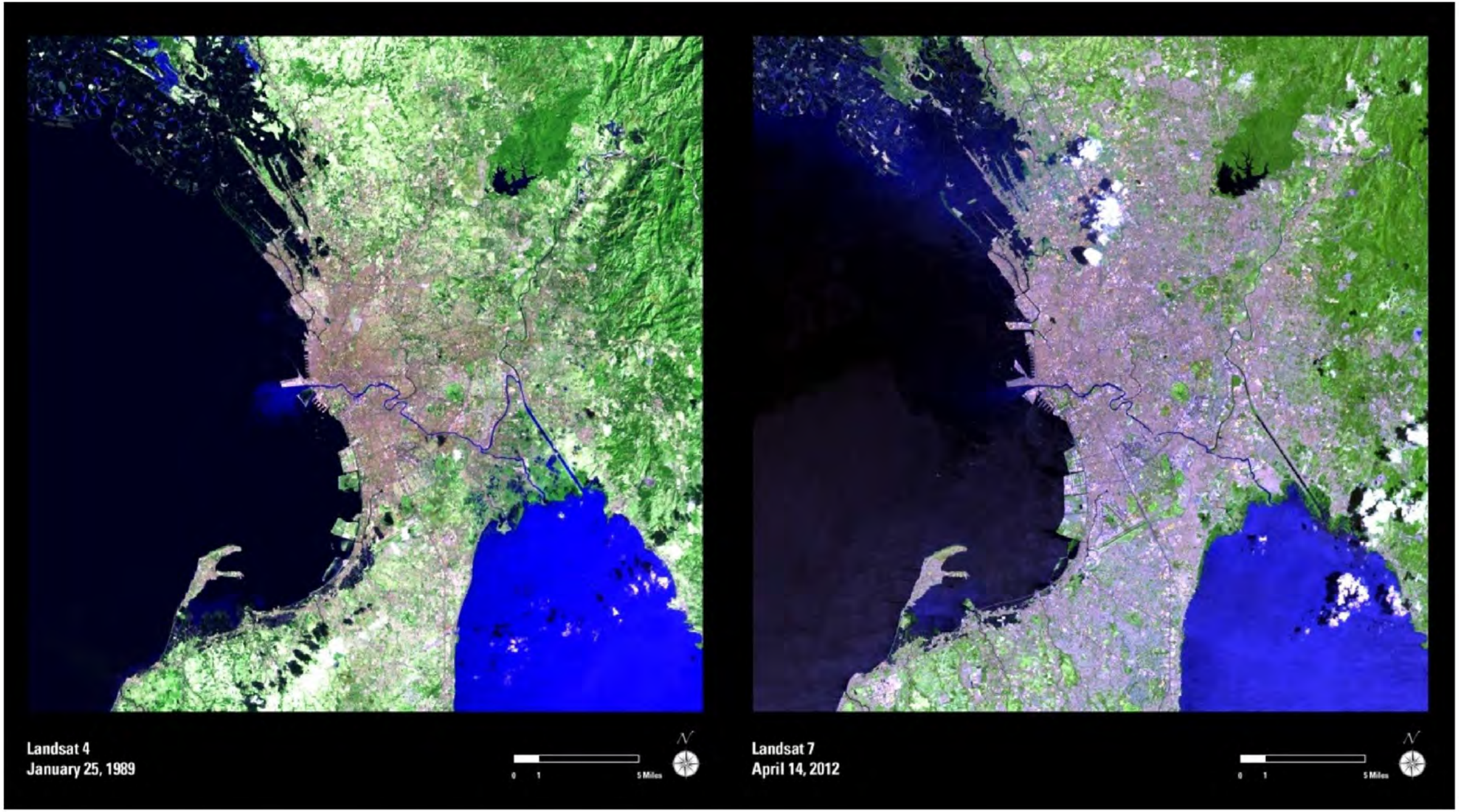


Figure 1.1. Urbanization of Manila *(Taken from USGS, 2012)*

Beykan, Naz. Marine Footprint: Urban Impacts on Marine Ecosystems in Manila Bay. Masters Thesis, Harvard Graduate School of Design (Master in Design Studies). May 2013.

Figure 3.4. Map of existing and proposed marine to urban reclamation areas *(Adapted from PEMSEA, 2004)*

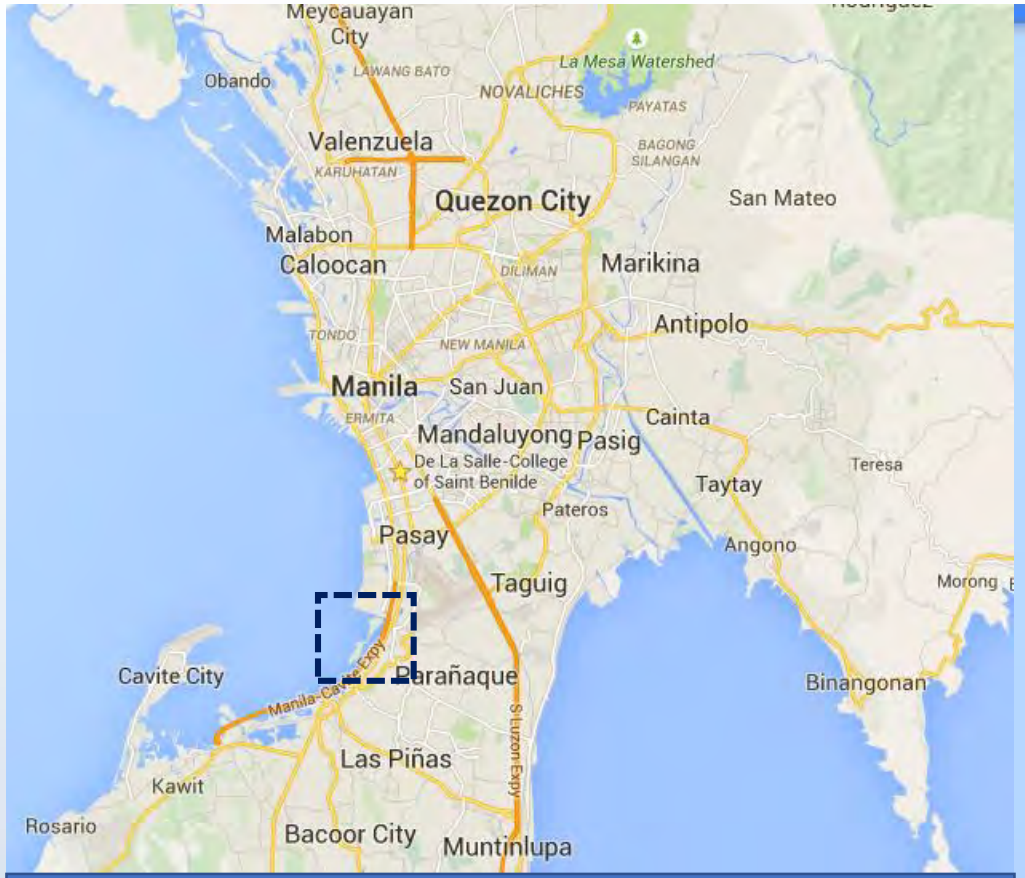
Land reclamations have considerable influence on the marine environment.

- alter the interaction of the marine with the coastal boundary. In some cases, the intertidal habitats which may be spawning and nursery areas for fish may be disturbed and lost due to the sharpening edge conditions.
- prevent water circulation, causing stagnant waters by eliminating the flushing capacity and also creating spots for garbarge to accumulate (PEMSEA, 2007).

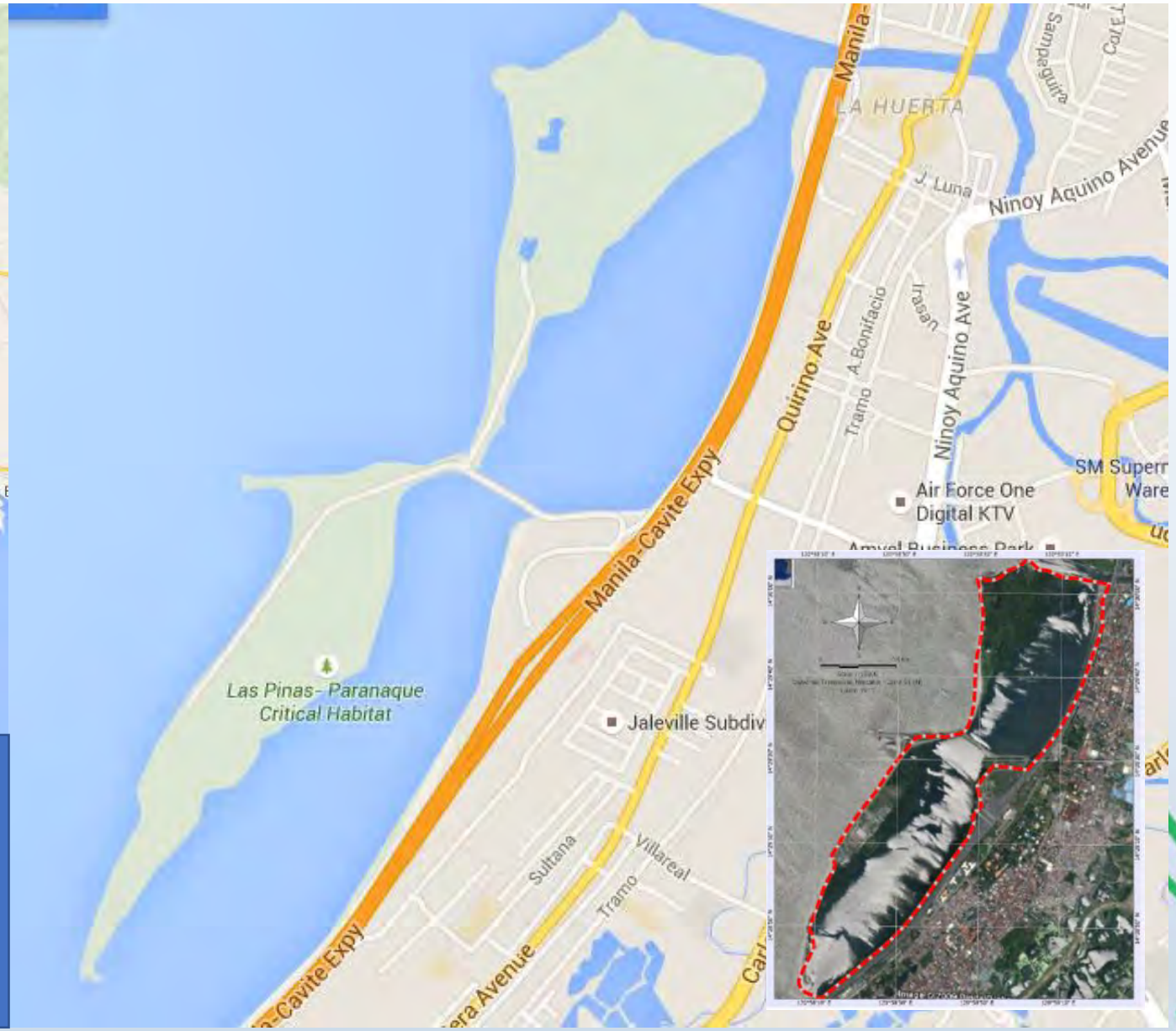
Siringan & Ringor (1997) states that "the gap between the reclaimed land and the Cavite Spit will likely experience rapid shallowing and eventual closure, unless maintained through dredging."

- The need for dredging the channels north from Cavite spit to keep them open will likely to have impacts on not only the microhabitats and fishponds in these areas, but also economics of the municipalities there.

Beykan, Naz. Marine Footprint: Urban Impacts on Marine Ecosystems in Manila Bay. Masters Thesis, Harvard Graduate School of Design (Master in Design Studies). May 2013.



175 to 194 hectares, including lagoons, located between 14.4 degrees latitude, 120.9 degrees longitude and 14.5 degrees latitude, 120.9 degrees longitude (DENR, 2014)



DENR, 2012. *Saving the Last Coastal Frontier: Framework Plan for the Coastal Lagoon of Las Pinas and Paranaque.* Quezon City: Department of Environment and Natural Resources.

The story of the

Las Piñas Paranaque Wetland Park at the LPPCHEA

- Located at the LPPCHEA, a designated Ramsar wetland of international importance (DENR, 2012).
  - Home to 1% population of the Black-winged Stilts (*Himantopus himantopus*); vulnerable Philippine Duck (*Anas luzonica*), and vulnerable Chinese Egret (*Egretta eulophotes*).
  - 52 species, 15 species migratory.
- Critical Issues
  - Institutional and attitude issues
  - Fishing related Issues
  - Land use issues
  - Pollution
  - Bird Strikes
  - Soil Erosion

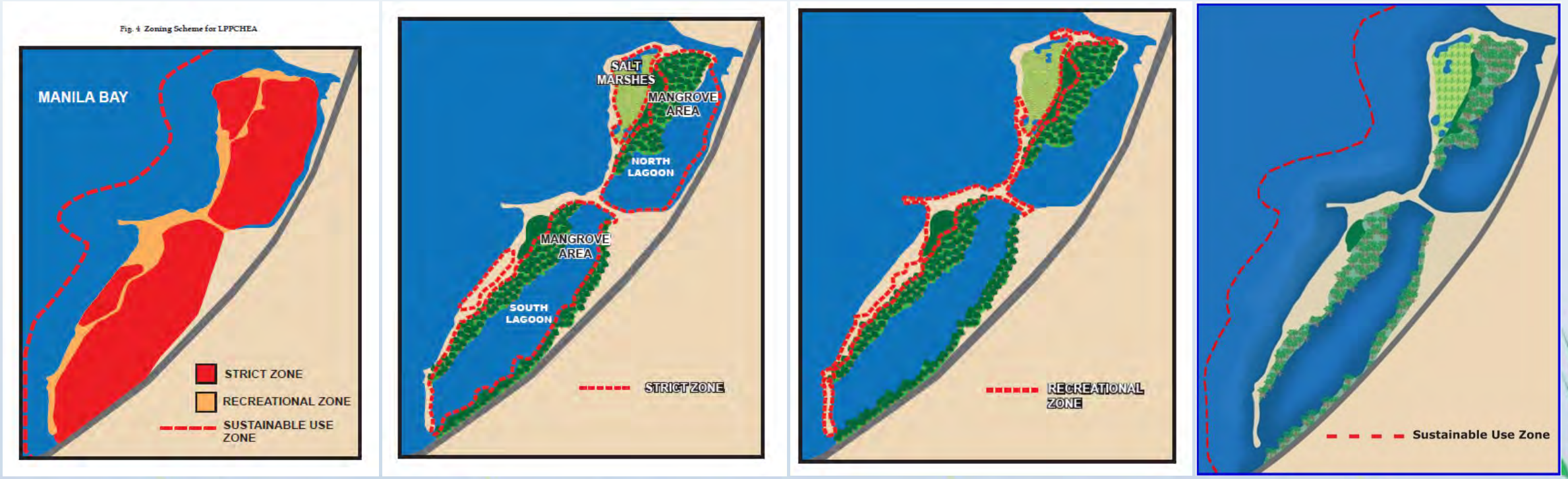
DENR, 2012. *Saving the Last Coastal Frontier: Framework Plan for the Coastal Lagoon of Las Pinas and Paranaque.* Quezon City: Department of Environment and Natural Resources.

The story of the

Las Piñas Paranaque Wetland Park at the LPPCHEA

Wise Use management and strategy

- Strict Zone (SZ);
- Recreational Zone (RZ); and
- Sustainable Use Zone (SU).



DENR, 2012. *Saving the Last Coastal Frontier: Framework Plan for the Coastal Lagoon of Las Pinas and Paranaque.* Quezon City: Department of Environment and Natural Resources.

The SCPW-ASAPHIL Wetland Center Design Competitions
Lumban Delta as an Ecotourism Site (2004-2005)

The SCPW-ASAPHIL Wetland Center Design Competitions
Candaba Wetland Centre Design Competition (2009-2010)

The SCPW-ASAPHIL Wetland Center Design Competitions
Pasyal Ilog Pasig, Pasig River Wetland Centre Design Competition (2014)



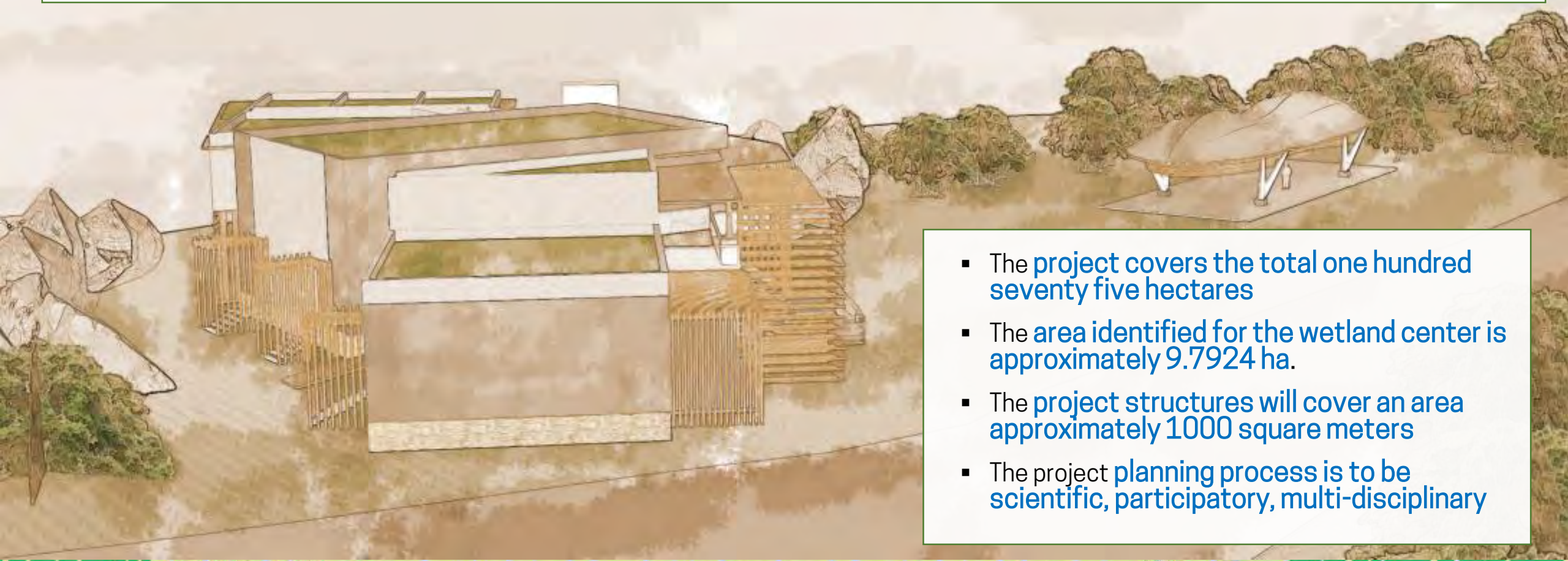




Reference:
Kared Discaya, 2004 (SCPW; Aaron Leccioens, 2005 (SCPW)

The Las Piñas-Parañaque Critical Habitat and Ecotourism Area Wetland Education Centre entails the

delivery of a wetland education and learning centre supported by selected infrastructure geared towards the interaction between people and wildlife and the conduct of communication, education, participation, and awareness activities in support of wetland conservation



- The project covers the total one hundred seventy five hectares
- The area identified for the wetland center is approximately 9.7924 ha.
- The project structures will cover an area approximately 1000 square meters
- The project planning process is to be scientific, participatory, multi-disciplinary

SCPW convened a *pro bono* design team to work on the details of the proposal with the DENR-NCR and the Office of Senatory Cynthia A. Villar.

LPPCHEA Design Team

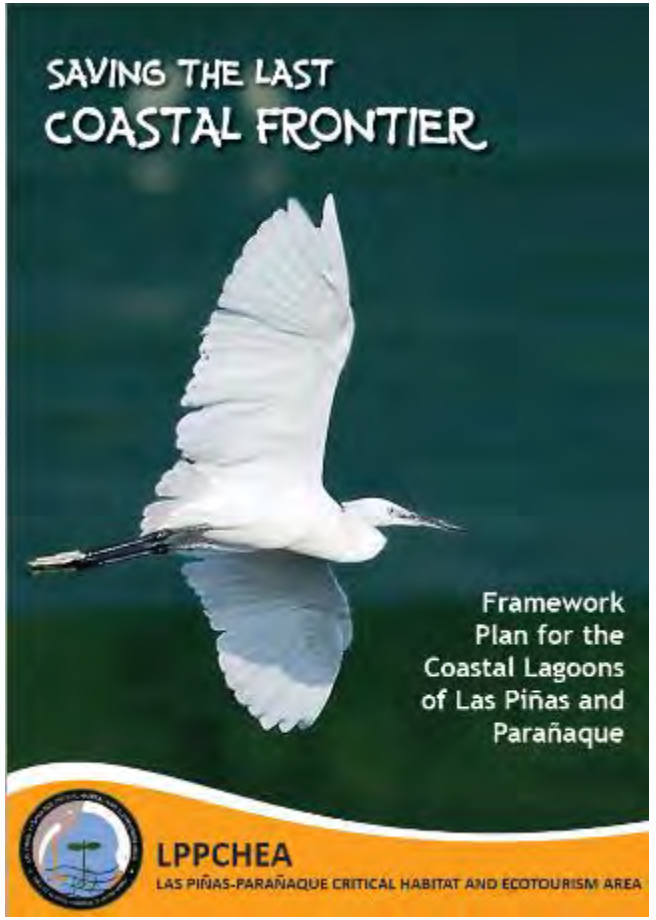
TEAM LEADER	AR Aaron Julius M. Lecciones, MSc
LAR / EnP	LAR Kristofferson P. Reyes, MA, EnP
LEED AP	AR Andrea K. Dorotan, MDes
Env Engr	Engr Ayona Devanadera, PhD
LIGHTING DESIGNER	AR Grace M. Montemayor
JUNIOR DESIGNER	Abigail Areja

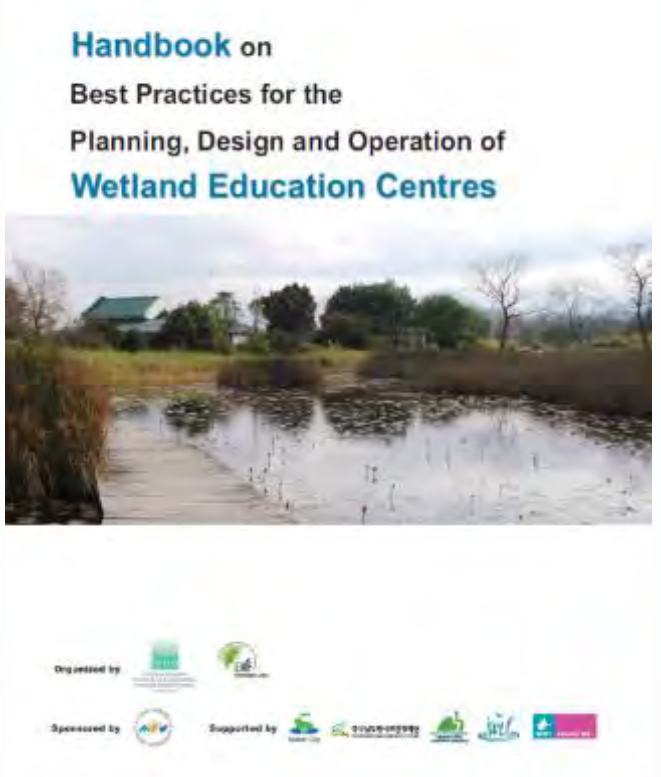
CEPA and the Design of the Manila Bay Wetland Park

Design Considerations

Major references:

- LPPCHEA Framework Plan
- Handbook on Best Practices for the Planning, Design and Operation of Wetland Education Centres





Design Philosophy

Filipino Culture and Design
Ethics in Context
CEPA Aesthetic

Filipino Culture and Design

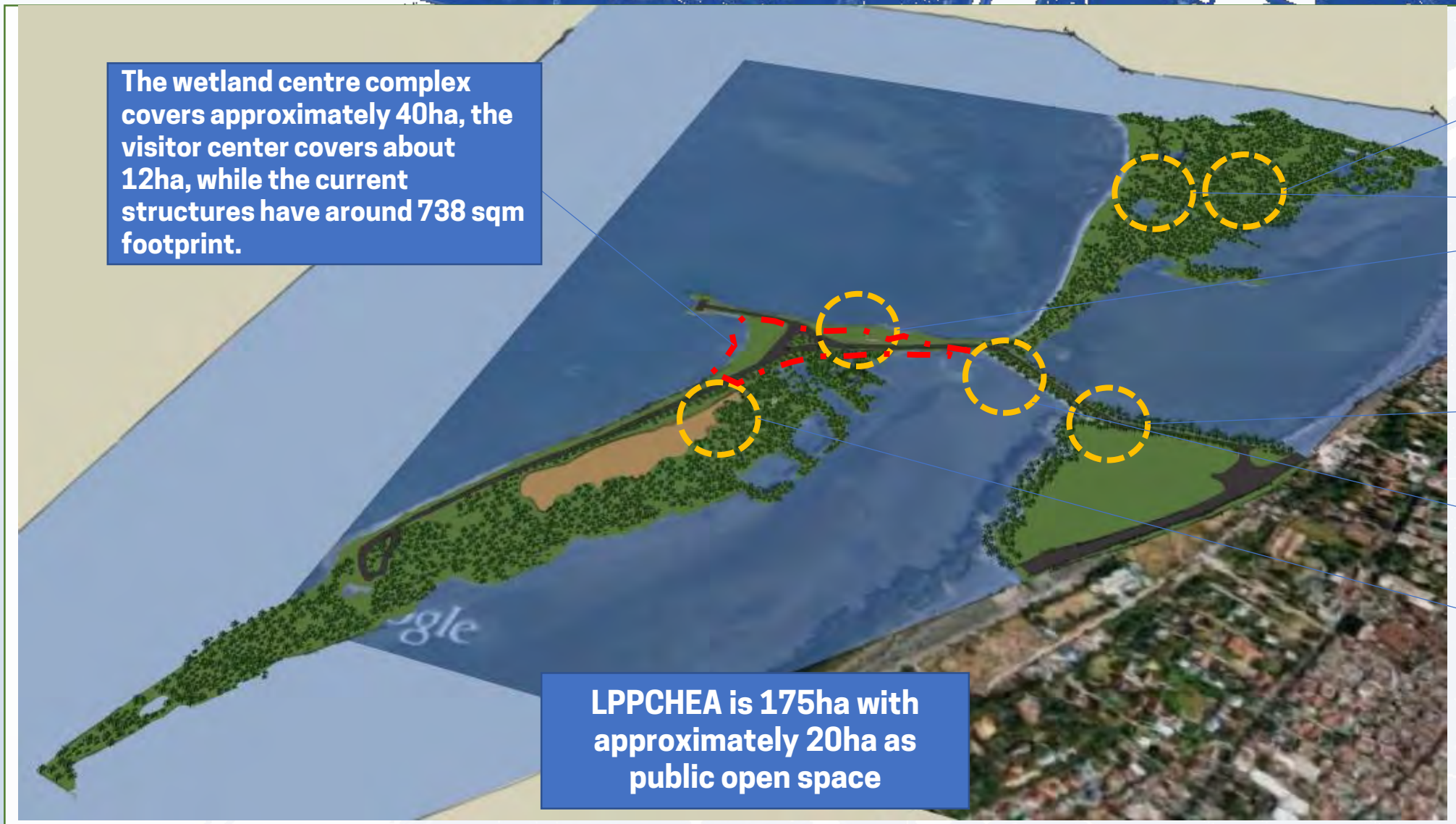
- Flexible and open
- warm and cozy
- Socio-petal and inviting
- Festive and playful
- Progressive and energetic
- Bold and strikingly unconventional
- Uses natural forms

Ethics in Context

- sustainable
- locally sourced materials
- responsive to the needs of stakeholders
- highlights the natural & built environment
- contributes to the existing pool of design knowledge

CEPA Aesthetic

- Highlights ecosystem processes
- safe environments and spaces for learning and engagement
- enhances existing flora and fauna
- Minimising disturbance to plants and animals
- Small physical footprints – large positive imprints



Las Pinas - Paranaque Wetland Park
LPPCHEA

scpw
society for the conservation
of Philippine wetla

SITE PROGRAMME

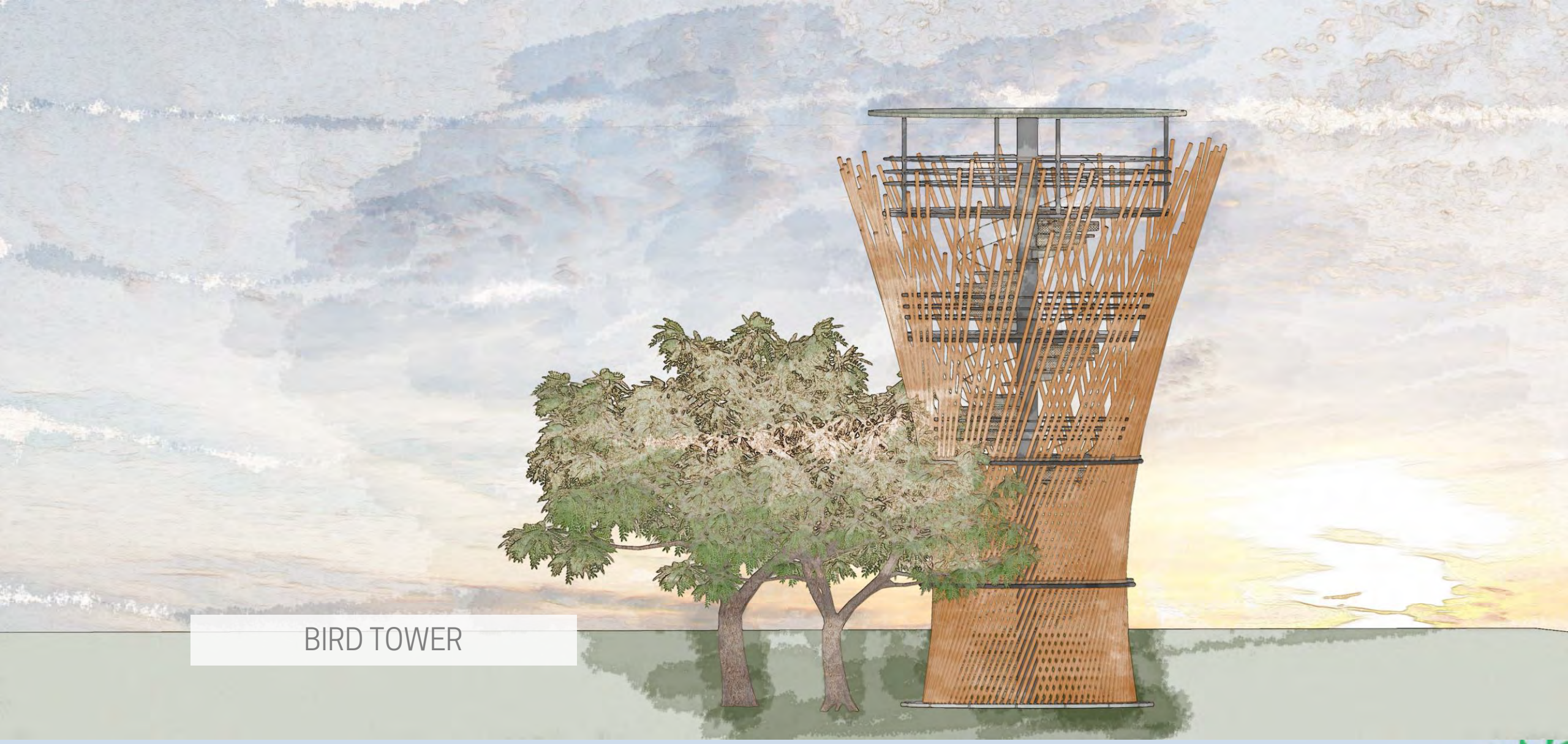
1	DROP-OFF
2	AMPHITHEATER
3	PATH WALK
4	MANGROVE
5	BOARDWALK
6	WETLAND CENTER 'STRATA'
7	WETLAND CENTER 'WAVE'
8	PLAZA
9	OPEN LAWN
10	ROCK FORMATIONS
11	PARKING AREA
12	COMFORT ROOMS
13	TRELLIS

LPPCHEA Wetlands Design Team

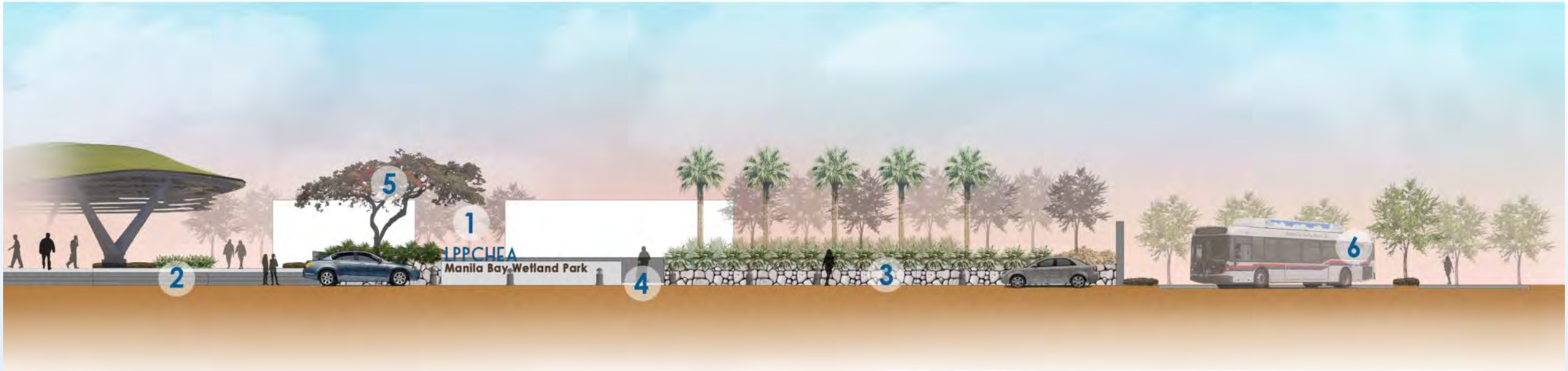

WETLAND CENTRE STRATA
WETLAND CENTRE WAVE

BIRD HIDE

WELCOME ARCH



BIRD TOWER



LEGEND

1 SIGNAGE
2 STAIRS
3 PLANTER BOX
4 RAMP LANDING
5 FEATURE TREE
6 PARKING SLOTS

0 5 15 20

KEY PLAN

Manila Bay Wetland Park LPPCHEA

ELEVATION | *DROP-OFF AND SIGNAGE*

Manila Bay Wetland Park LPPCHEA

LEGEND

1	SIGNAGE
2	STAIRS
3	PLANTER BOX
4	RAMP LANDING
5	FEATURE TREE
6	PARKING SLOTS

KEY PLAN

Manila Bay Wetland Park LPPCHEA

ELEVATION | *DROP-OFF AND SIGNAGE*

Manila Bay Wetland Park LPPCHEA

scpw society for the conservation of Philippine wetlands

LPPCHEA Wetlands Design Team

LEGEND

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Manila Bay Wetland Park LPPCHEA

ELEVATION | *DROP-OFF AND SIGNAGE*

Manila Bay Wetland Park LPPCHEA
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LPPCHEA Wetlands Design Team

LEGEND

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KEY PLAN

Manila Bay Wetland Park LPPCHEA

ELEVATION | *DROP-OFF AND SIGNAGE*

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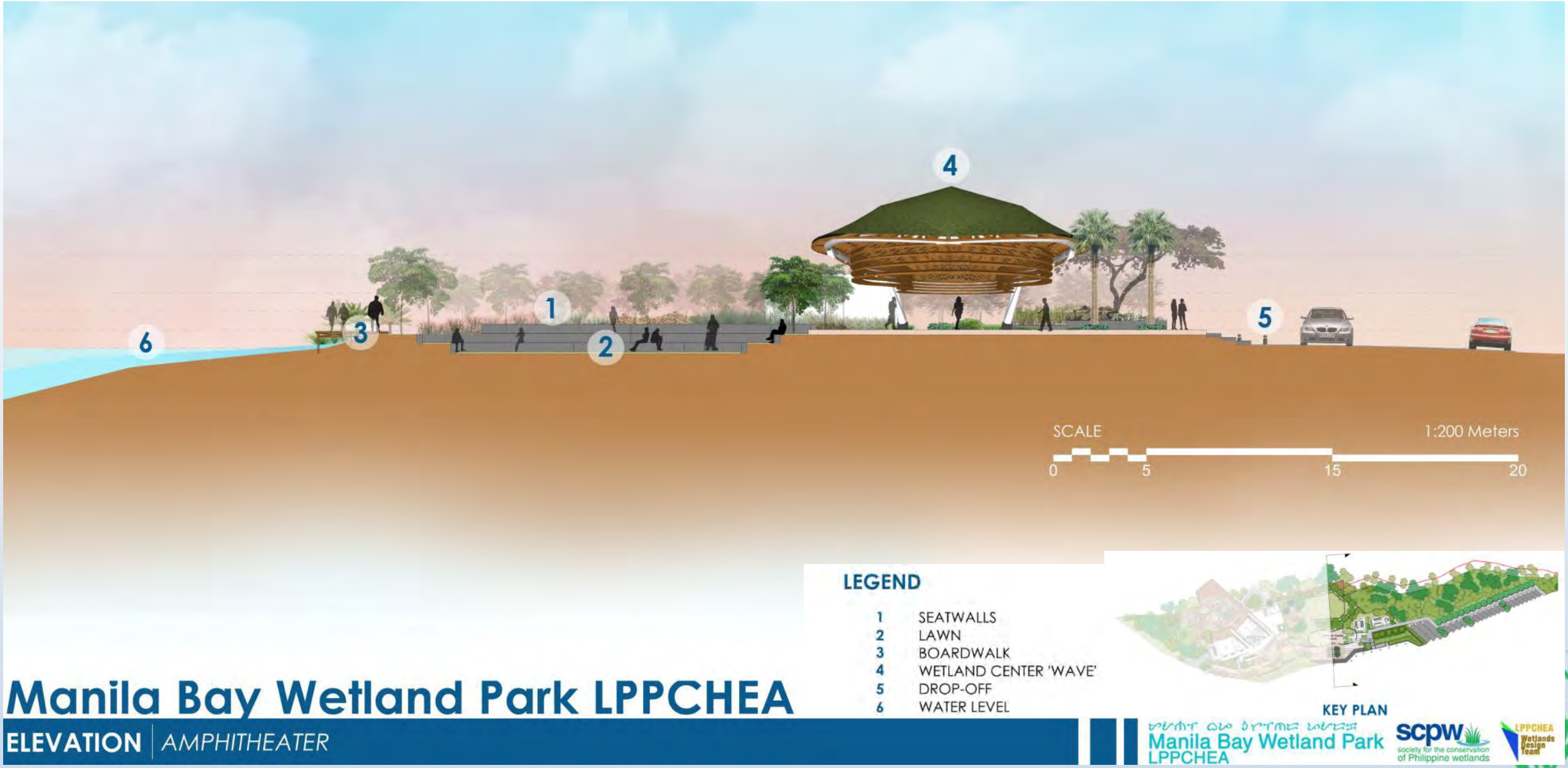
LPPCHEA Wetlands Design Team



LEGEND

1	SEATWALLS
2	LAWN
3	BOARDWALK
4	WETLAND CENTER 'WAVE'
5	DROP-OFF
6	WATER LEVEL

KEY PLAN

Manila Bay Wetland Park LPPCHEA

ELEVATION | *AMPHITHEATER*

Manila Bay Wetland Park LPPCHEA

scpw society for the conservation of Philippine wetlands

LPPCHEA Wetlands Design Team

WETLAND CENTRE WAVE


KEEP
CALM
AND
Picnic at LPPCHEA
Las Piñas-Parañaque Critical Habitat and Ecotourism Area
Wetlands for a
Sustainable Urban Future
World Wetlands Day 2018


Earth Day
2018
GREEN
GREEN
END PLASTIC POLLUTION
Earth Day
2018
GREEN
GREEN
END PLASTIC POLLUTION
GREENTHEOC
80%
DEAD ZONES
245,000
5 GYRES
PLASTICS ARE FOREVER
HELP TURN THE TIDE AGAINST PLAS

Las Piñas - Parañaque Wetland Park

Manila Bay Wetland Park
LPPCHEA
of Philippine wetlands

sed Session 06: Wetlands for a Sustainable Urban Future
onal Conference on Human Settlements Planning and Development

Challenges

- Varied interests of partners involved in the project implementation
- Polarized visions for the development of LPPCHEA
- Bureaucracy and lengthy processes
- Availability of project team who worked *Pro Bono*

Strengths and Lessons Learned

- Varied interests but same goals, work on areas of synergy
  - Integrating space programming requirements of different partners
- *Pro bono* design team, find advocates who are willing to share their expertise and time
- Have clear tasking among teams in the project
- Having a design for a wetland center comes in handy in fund-raising for its construction.

Way Forward

- Develop a unified master plan for the LPPCHEA
- Develop the “software” for the Wetland Centre (CEPA Program)
- Prepare a Business Plan for the Wetland Centre to ensure sustainability
- Continue work for the construction of the rest of the Wetland Education Centre facilities
- Detail work plan for phase 2
- Market small wins for additional partners
- **Make People and Nature First in Manila Bay Master Planning**

THANK YOU!

Urban waterfronts as Wetland Learning Centres – The story of the Las Piñas – Parañaque Critical Habitat and Ecotourism Area

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