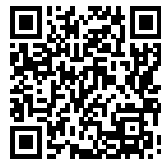


**“Typhoon Proof” Coastal Reserve for Shenzhen**  
Mandaworks, Gossamer & Arcadis

## TYPHOON PROOF COASTAL RESERVE: A NEW RESILIENT MASTERPLAN

*Posted on September 15, 2020 by martabuges*



**Categories:** [Arcadis](#), [Energy and sustainability](#), [Essay](#), [Gossamer](#), [Mandaworks](#), [Middle Density](#), [Territory and mobility](#), [Urban Paradigms](#)

**Tags:** [Architecture&nature](#), [Biodiversity](#), [China](#), [Coast line](#), [Cultural identity](#), [Density](#), [Design strategies](#), [Ecological reserve](#), [Ecosystem ecology](#), [Environmental protection](#), [Health contributor](#), [Intervention](#), [Landscape](#), [Landscape planning](#), [Living system](#), [Local Awareness](#), [Masterplan](#), [Mobility](#), [Project](#), [Reconstruction](#), [Resilience](#), [Resilient cities](#), [Shenzhen](#), [Soft mobility](#), [Sustainable Development](#), [Sustainable tourism](#), [Urban planning](#), [Water level](#), [Waterfront](#), [Well-being](#)

**Authorship:** Proposal by Mandaworks, Gossamer & Arcadis.

As part of an international competition organized by the Shenzhen Bureau of Urban Planning & Natural Resources, Mandaworks, Gossamer & Arcadis were commissioned to create a new resilient masterplan for one of Shenzhen's last remaining natural coastlines. On the doorstep of one of China's largest cities, the new Xichong Coastal Reserve enhances the natural seaside getaway experience, protects local ecosystems and communities, while supporting a new ecological tourism industry for a burgeoning Chinese middle class. The Coastal Reserve protects the region's rich biodiversity and restores historic fishing villages.

In late 2018, Typhoon Manghut devastated southern China, causing billions of dollars in damage. Since then, a slew of reconstruction projects have been underway. Despite being in a typhoon zone, popular beach destinations have approved new high-density mega-developments along their beachfronts. The Xichong Coastal Reserve is markedly different. The masterplan prioritizes typhoon resistance, ecological restoration and preservation of local villages. In this way, the design reflects the broader shift within China towards sensitive development, environmental protection, cultural preservation and genuine nature experiences.



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## **Landscape-Driven Urbanism**

Xichong Coastal Reserve leads with a progressive landscape approach integrating transport, urban design, architecture, engineering and tourism strategies prioritize environmentally driven solutions to a wide range of challenges. The robust landscape-led framework allows for a rational development strategy that enhances the area's biodiversity, environment and extreme weather resiliency.

The project restores natural water flows by repairing eroded river corridors, wetlands and coastal mangrove habitats. This, in turn, provides a suite of tourist experiences – from boardwalks to kayaking routes, bird hides and floating markets, while flood-proof residences respond to the natural river system. Upgrades to existing farmland, allowing for organic agriculture, markets and

teahouses are protected by surrounding mountains that create opportunities for new lookouts, bicycle trails, hiking shelters and cliff walks.

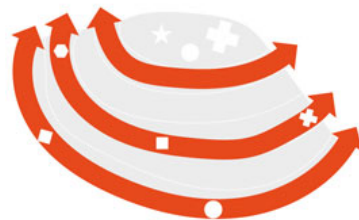
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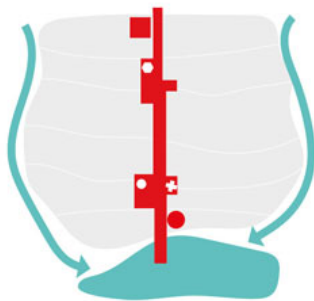
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XIGONG: THE VALLEY VILLAGE



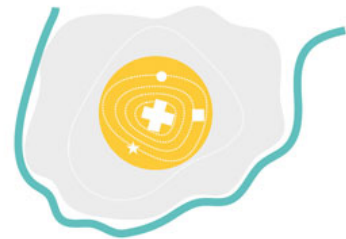
沙岗：梯田村  
SHAGANG: THE TERRACE VILLAGE



鹤薮：风水村  
HESOU: THE AXIS VILLAGE



新屋：云顶村  
XINWU: THE PEAK VILLAGE



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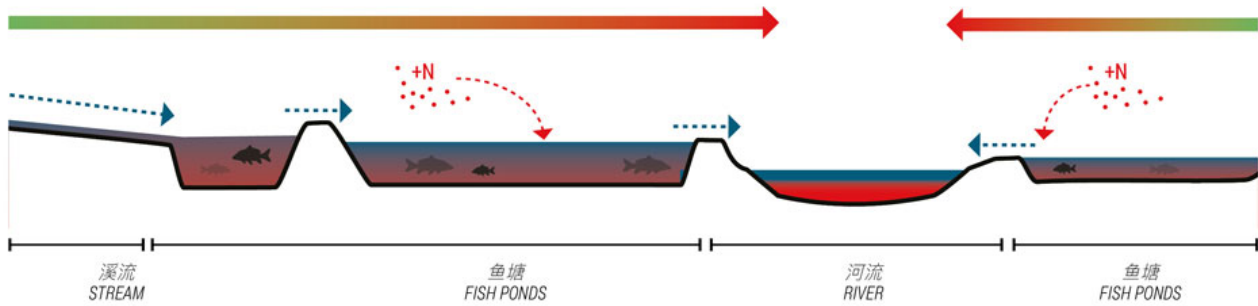




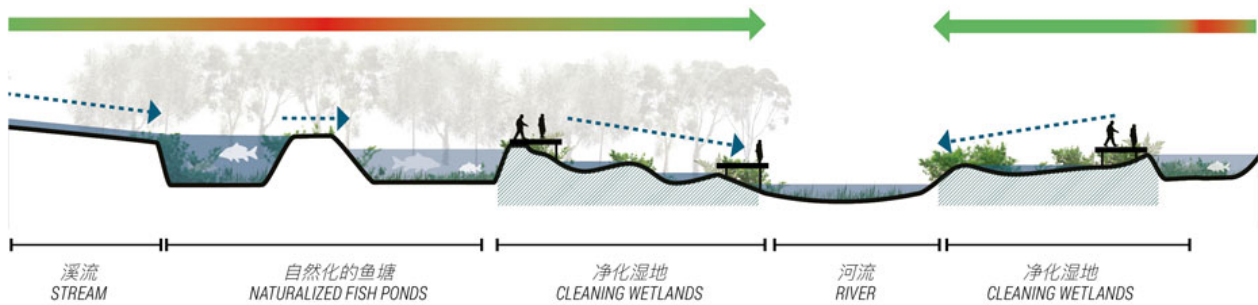
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## BEFORE



## AFTER



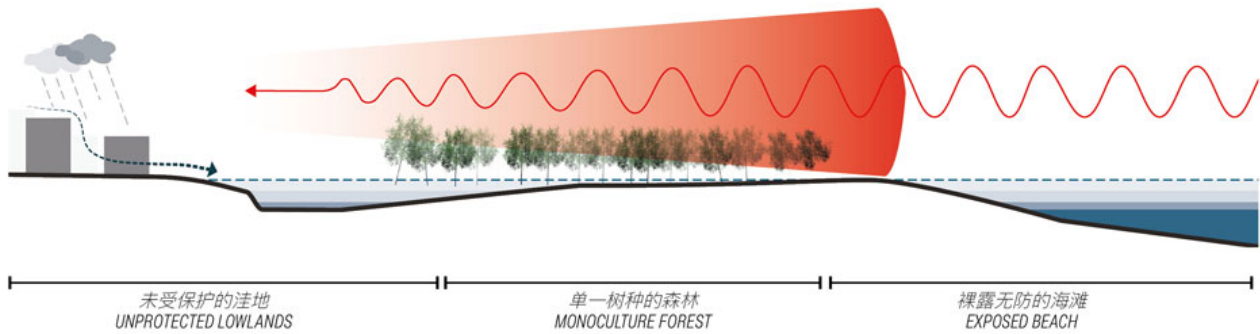
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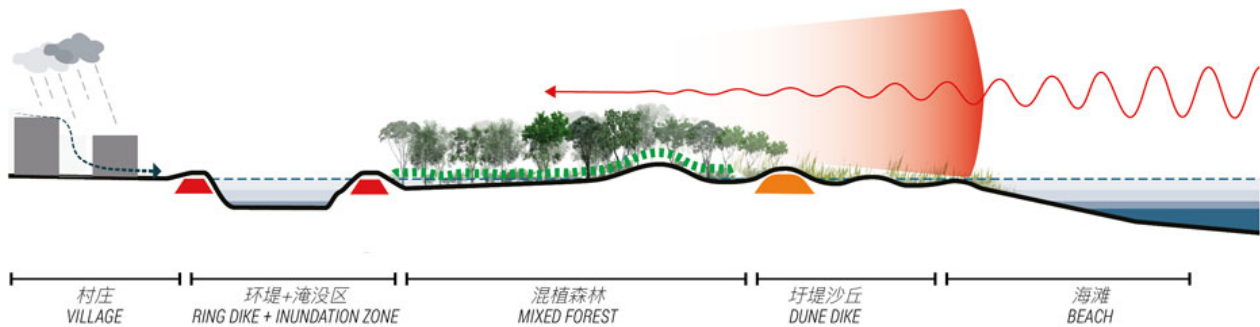
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## BEFORE



## AFTER



## Defending with Landscape

The project's coastal defense strategy introduces flood and typhoon mitigation by reinstating dune systems previously destroyed by typhoons and over-development. Cafes, restaurants and changing rooms are built within the re-constructed dune-scapes, connecting with sheltered beach walks, camping areas and nature playgrounds. A new dike, hybridizing modern engineering and natural coastal landscapes, presents unique landscape typologies for visitors to interact with while also

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protecting against flooding and high seas.

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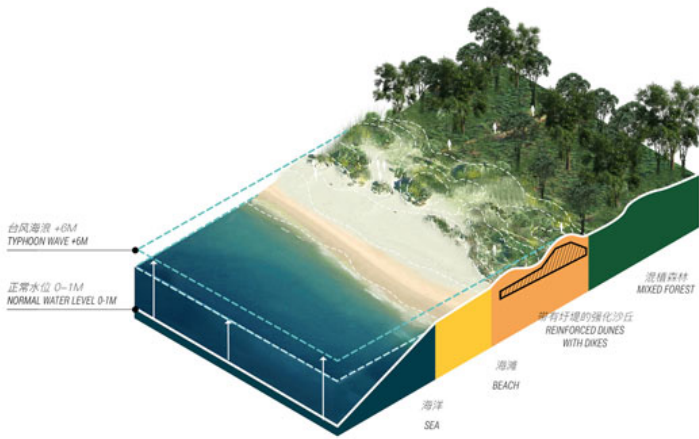
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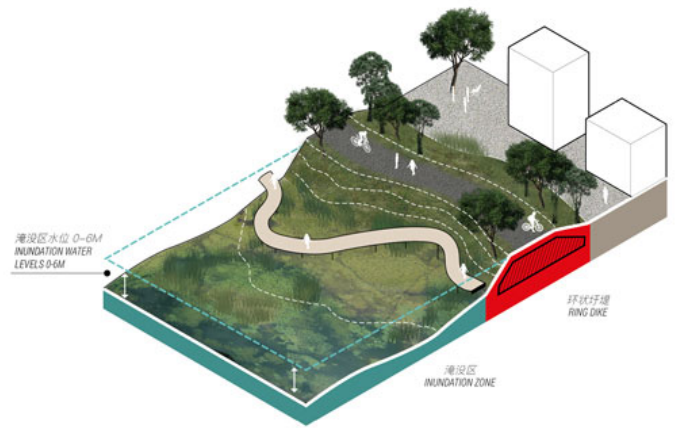


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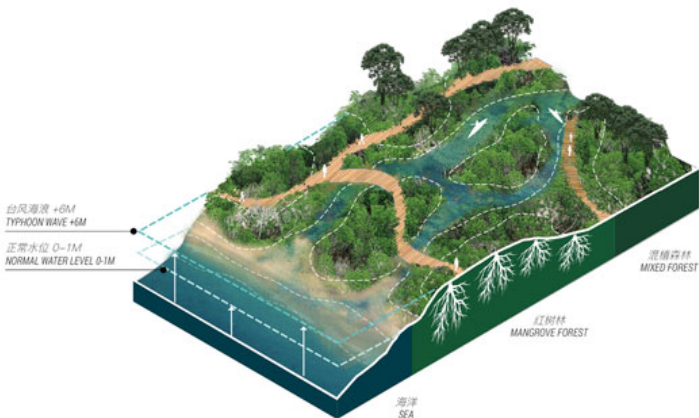
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COASTAL DEFENSE: DUNE DIKE AND MIXED FOREST



COASTAL DEFENCE: RING DIKE + INUNDATION ZONE



RIVER SYSTEM: COASTAL MANGROVE FOREST



RIVER SYSTEM: FISHPOND AND WETLANDS

## Building with Landscape

Most of the urban expansion is focused around four existing villages that are then aligned with the surrounding landscape conditions.

Xigong Town, located in a quiet and serene valley, is expanded along a restored stream running through the center of town. Shagang Town grows around new terraced orchards, where local



produce is grown and sold at the town markets. Hesou Town, the largest of the villages, is upgraded and a central civic street is designed to bring people from the mountains all the way to the beach via a new cable car network and trails. Finally, Xinwu Town, located to the east, is developed around a new health and wellness retreat that overlooks the coastline.

While most of new development and residents will be concentrated in the larger villages, scattered through the landscape are a series of boutique accommodations for visitors and residents. The small architectural interventions respond to the forests, mountains, farmlands and rivers bringing people closer to a new, rejuvenated Xichong.

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