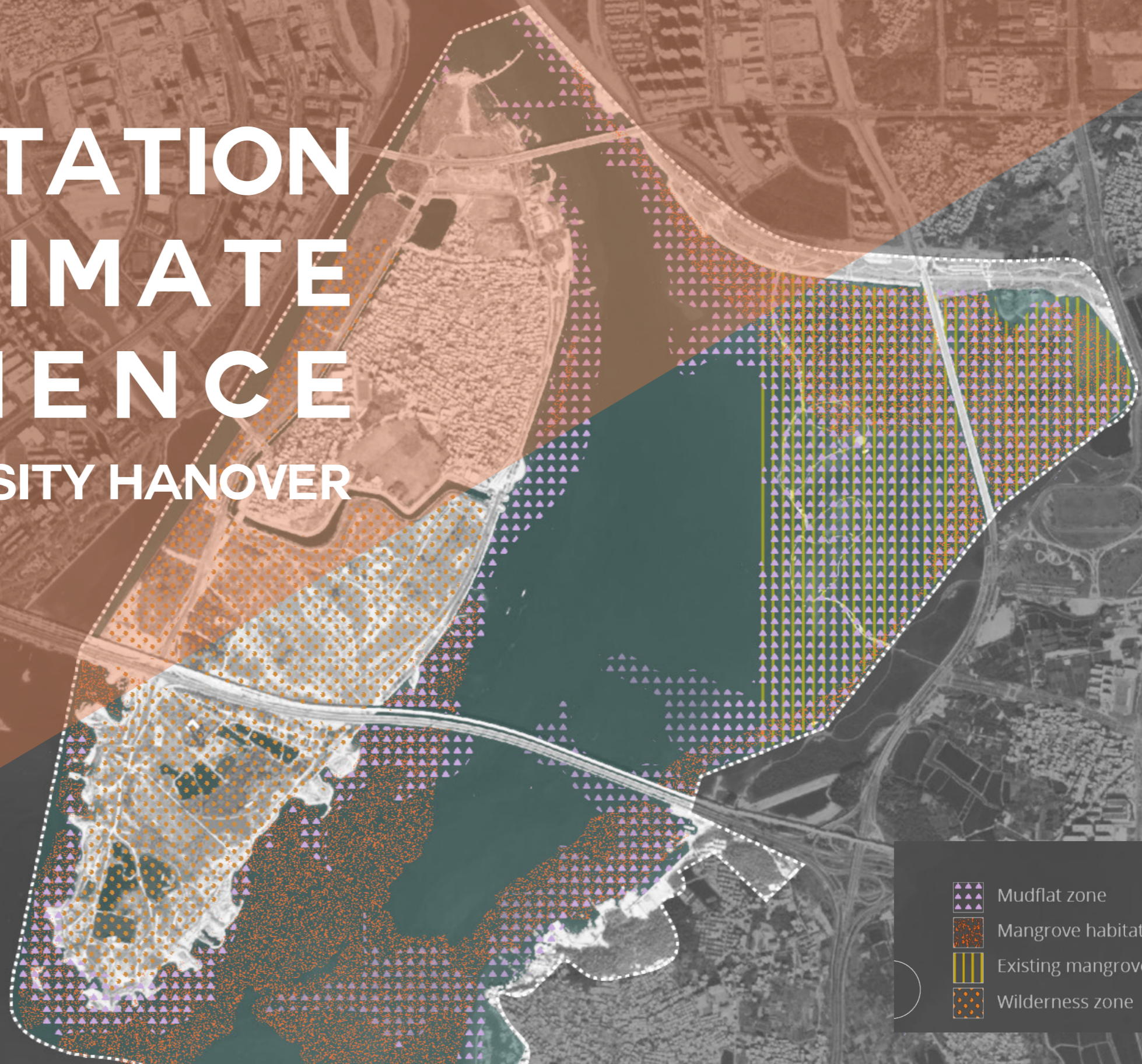






# COHABITATION FOR CLIMATE RESILIENCE

LEIBNIZ UNIVERSITY HANOVER



-  Mudflat zone
-  Mangrove habitat suitability zone
-  Existing mangrove reserve
-  Wilderness zone

Country / City **GERMANY / HANOVER**

University / School **GOTTFRIED WILHELM LEIBNIZ UNIVERSITY HANOVER**

Academic year **5**

Title of the project **BE ALIVE: ECOLOGICAL SHORELINE DESIGN FOR A RAPIDLY URBANISING BAY CITY, XIAMEN, CHINA**

Authors **YIWEN ZENG**

## TECHNICAL DOSSIER

Title of the project **BE ALIVE: ECOLOGICAL SHORELINE DESIGN FOR A RAPIDLY URBANISING BAY CITY, XIAMEN, CHINA**  
Authors **YIWEN ZENG**  
Title of the course **MASTER THESIS**  
Academic year **5**  
Teaching Staff **PROF. DR. MARTIN PROMINSKI, M.SC. DAVID KREIS**  
Department / Section / Program of belonging **FACULTY FOR ARCHITECTURE AND LANDSCAPE,  
INSTITUTE FOR OPEN SPACE PLANNING AND DESIGN**  
University / School **GOTTFRIED WILHELM LEIBNIZ UNIVERSITY HANOVER**



As climate change continues to intensify, extreme weather events are becoming more frequent worldwide and sea level rise is becoming an irreversible trend. Even if the sea level will rise only marginally in the short term, the rise in basic water levels combined with typhoons and storm surges can easily cause severe flooding in coastal lowlands, resulting in loss of life and socio-economic damage. Xiamen's shoreline was artificially altered and hardened, the original distance between land and sea was shortened, the area of mudflats tended to decline annually, the natural coastal landscape became fragmented, and the ecological safety of the coastal zone became an enormous challenge for the sustainable development of Xiamen. A significant part of the city's coastline has already been built with solid dykes and dyke walls, which in the short term can quickly meet the needs of the city's rapid development and disaster prevention, but in the long term such hard protection will be difficult to cope with future global climate change and sea level rise. This project aims to establish a dynamic coastal landscape for Xiamen that can adapt to climate change in the long term through ecological instruments, which will also lead to an increase of biodiversity. The restoration of marine wetland landscapes, supplemented by sea water floating bed technologies to restore and maintain local ecosystems, are the focus of this design-based research.

For further information

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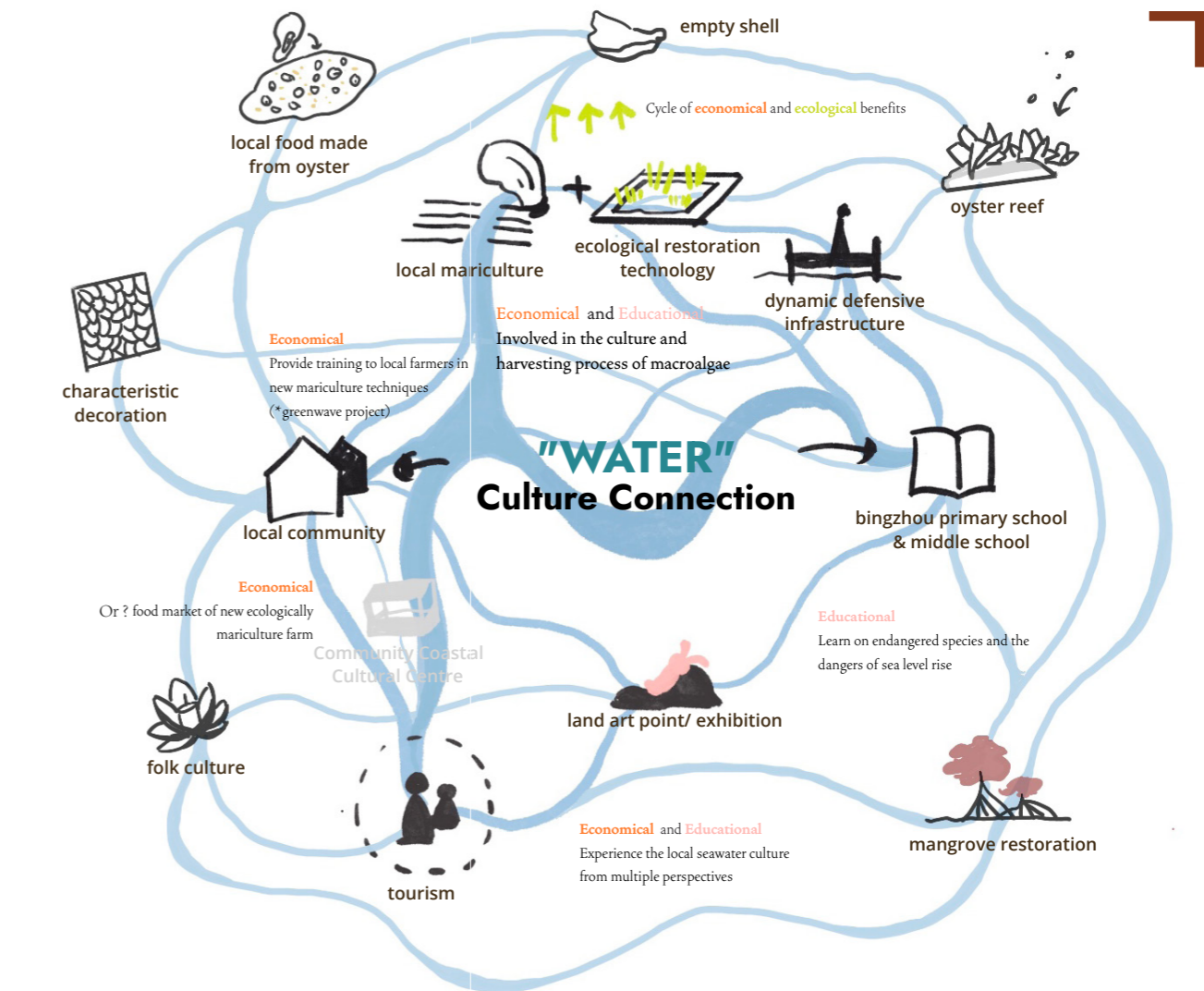
12th International Biennial Landscape Barcelona

Barcelona November 2023

**SCHOOL PRIZE**

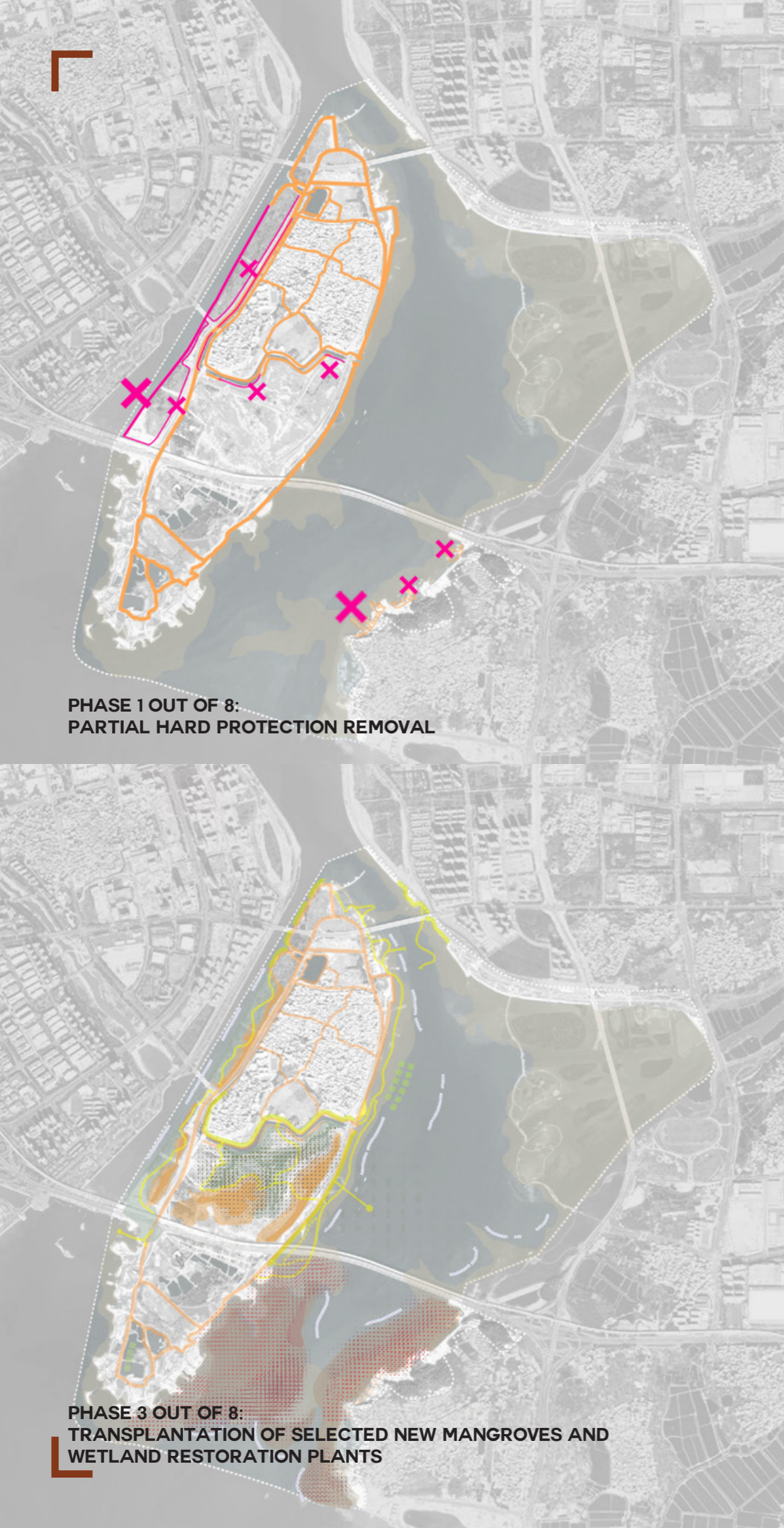


MASTERPLAN OF THE SITE IN 2050



CONNECTION WITH SEA WATER

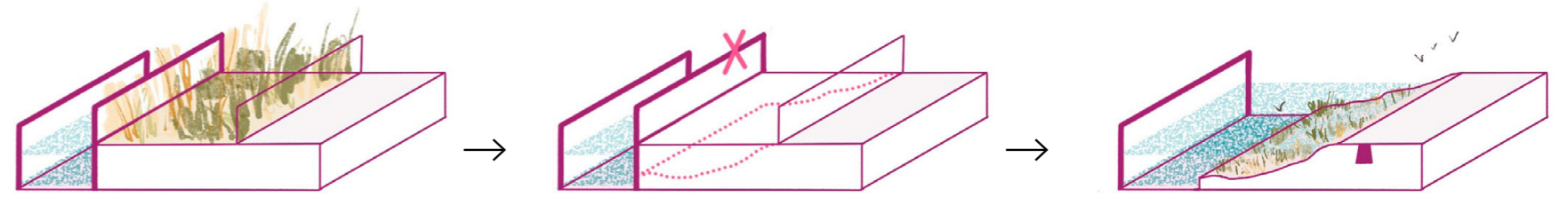




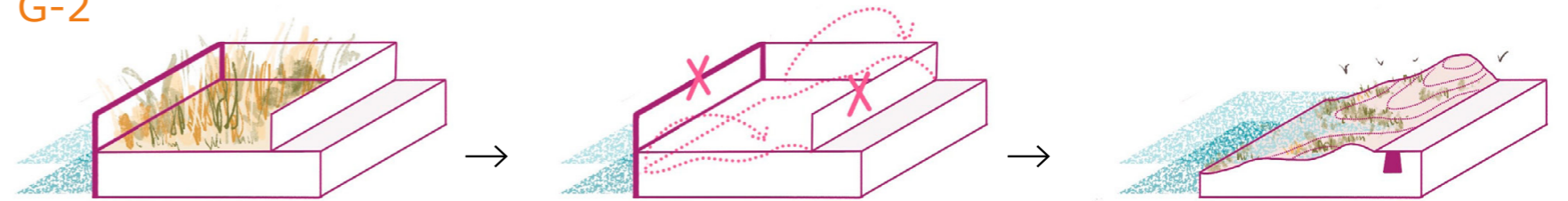
PHASE 1 OUT OF 8:  
PARTIAL HARD PROTECTION REMOVAL

PHASE 3 OUT OF 8:  
TRANSPLANTATION OF SELECTED NEW MANGROVES AND  
WETLAND RESTORATION PLANTS

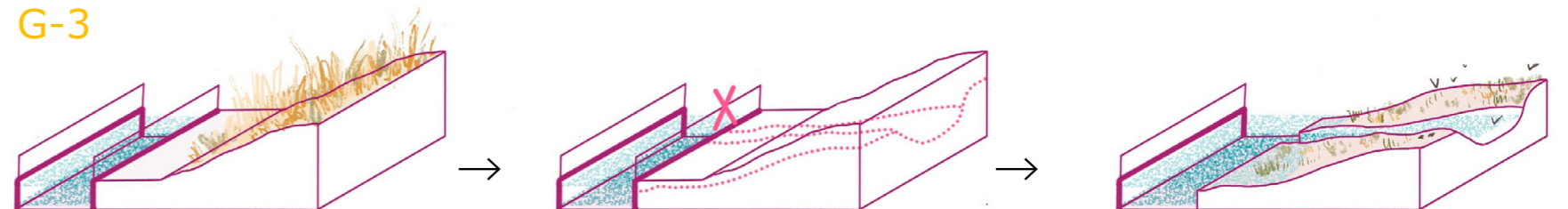
G-1



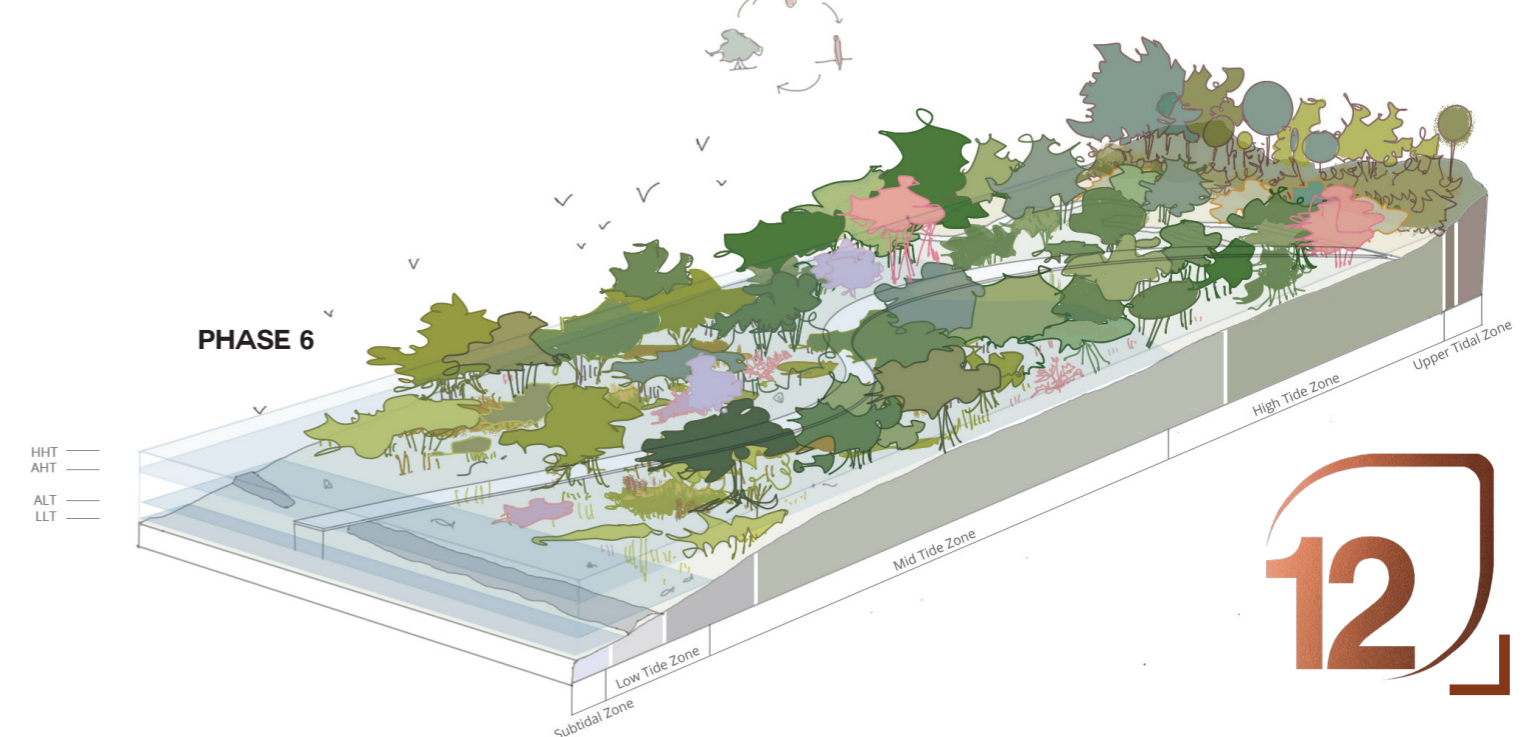
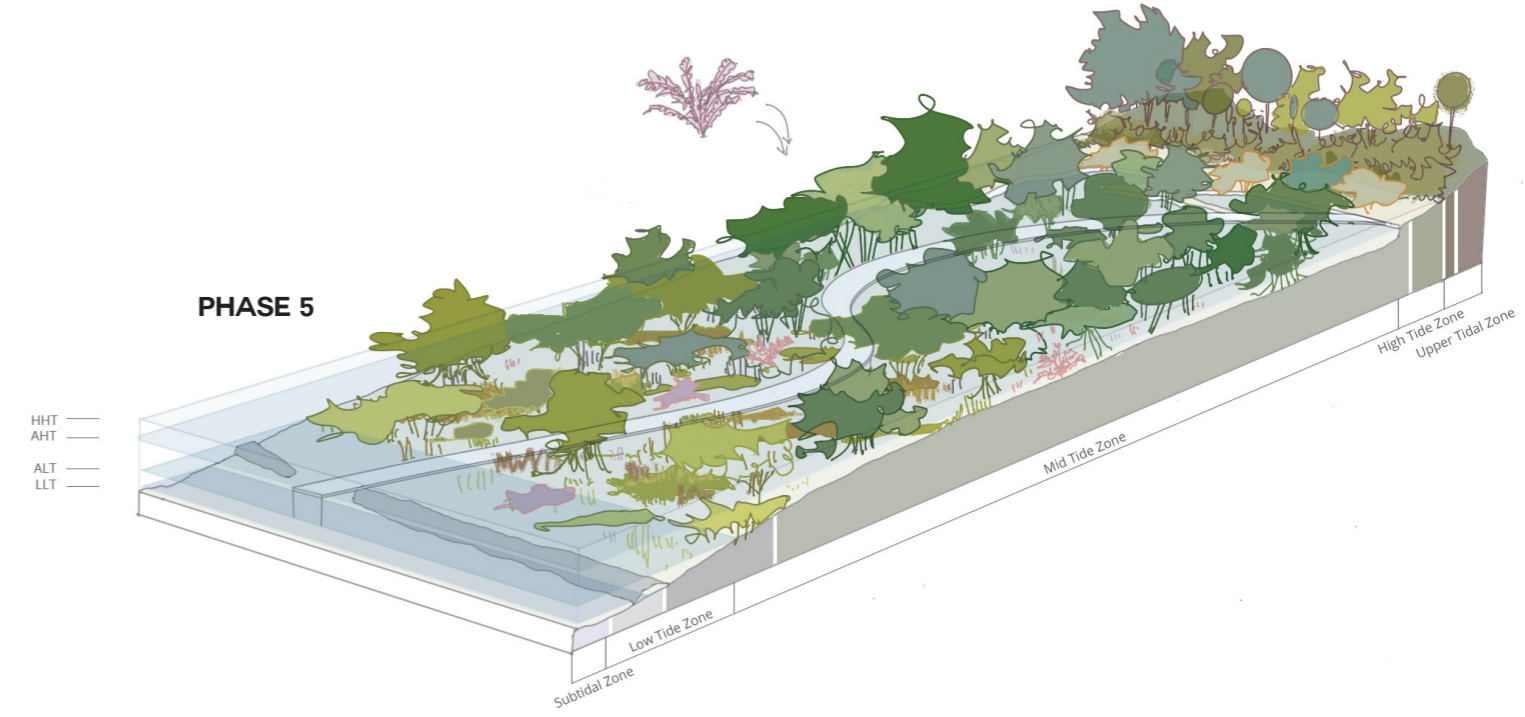
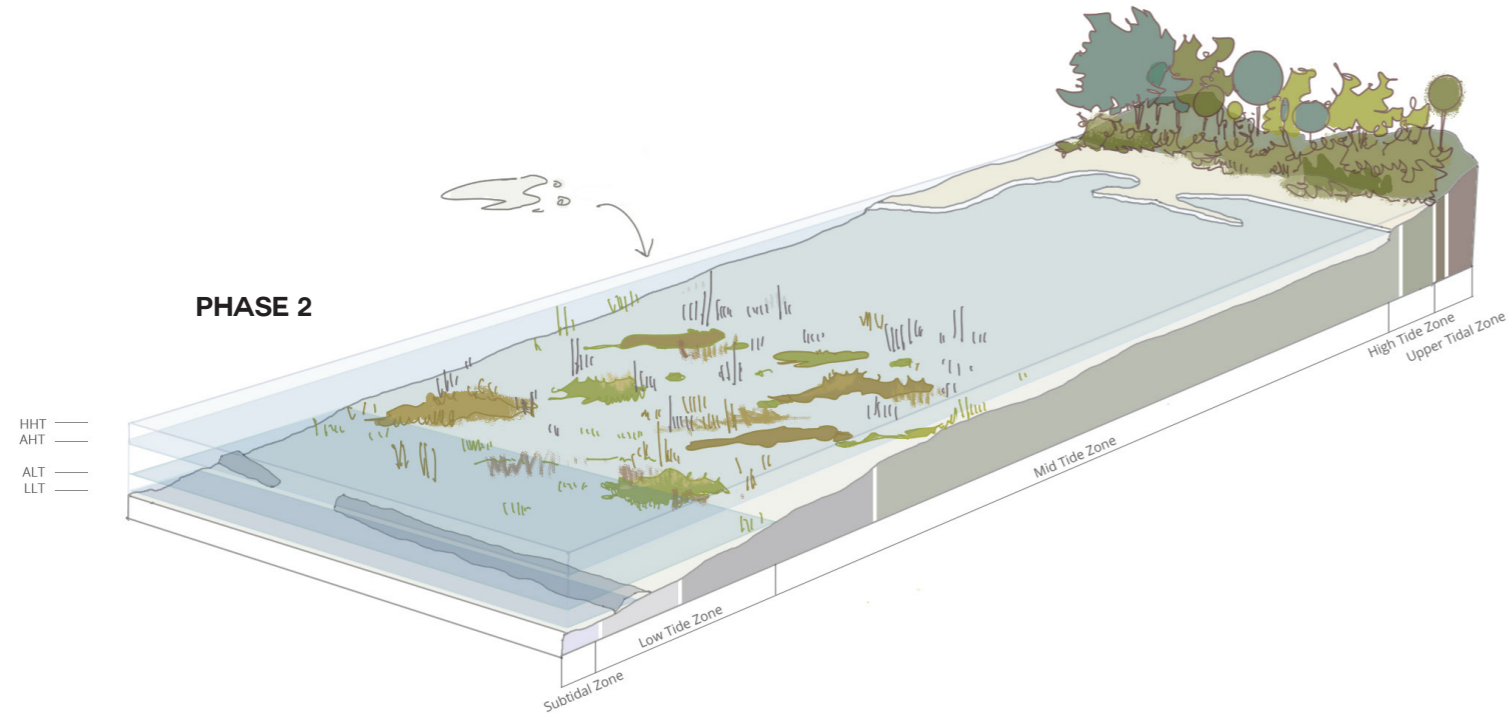
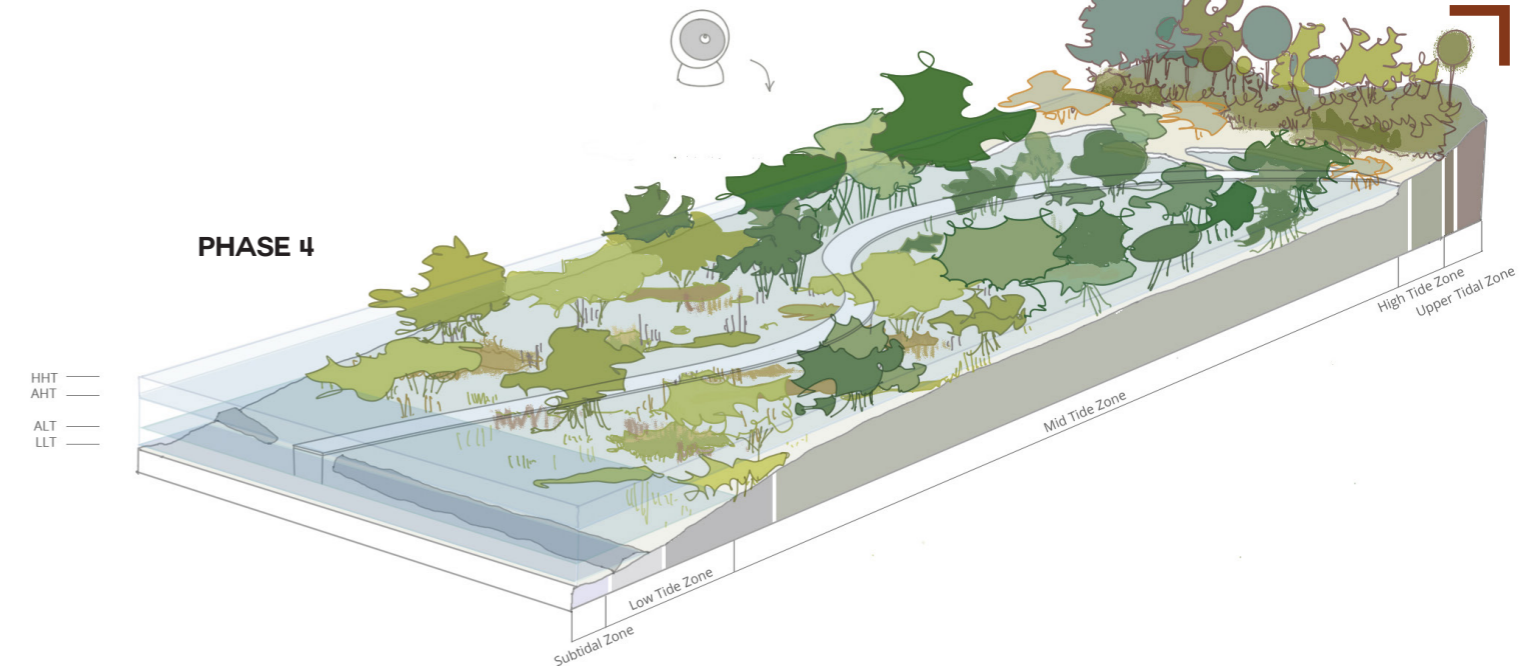
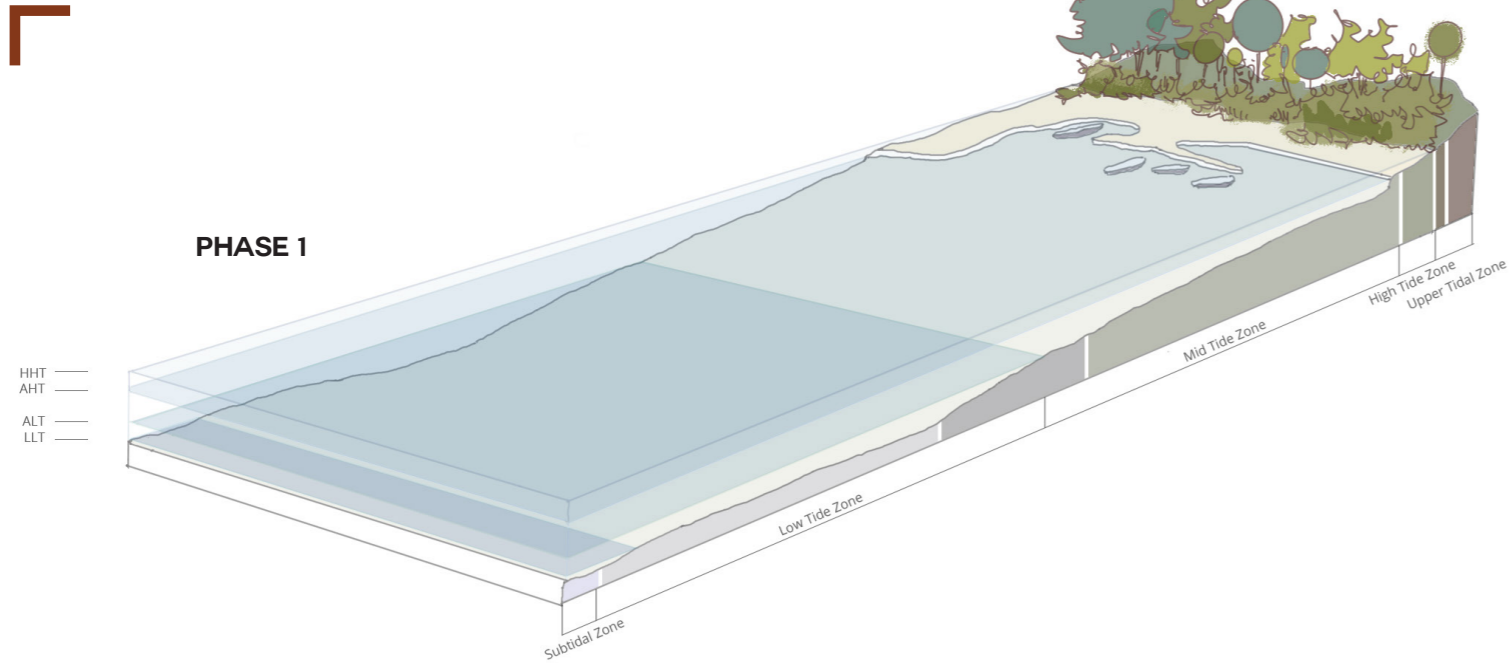
G-2



G-3



SELECTION OF 3 OUT OF 15 PROPOSED MEASURES:  
PARTIAL HARD PROTECTION REMOVAL AND WETLANDING



**MANGROVE WETLAND RESTORATION**