Fall 2020

Beyond the Border: On the Contested Island

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Beyond the Border: on the contested is-land

Thesis Prep
Littoral / Shift
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Every life is important and fragile, but what human being has done for centuries are destorying the **balance** between human and nature, threatening the future of every life on the Earth / Nowadays, **water** are going out of control, while **climate** are changing dramatically, international **boundaries** are thickening, and regional **human conflicts** are tensing. / New architectural form are needed in order to **restore** the wounded nature, **reconcile** the political contests, and **re-structur** the relation between human and non-human. / We are designing architecture as an **initiative** to solve those problems, starting from **one site** and **one marine creature**, then extending **ecologically**, **socially** and **culturally**.

Human
non-Human
Regional
Global
restore
reconcile
re-structure
contest
cultural ruin
political border
sea level rise
coastal pollution
coral reef degradation
architectural
geological
economical
political
cultural
site extent

In ancient Rome, 'Res communis omnium' was codified in law saying that the atomsphere, the running water, the ocean and the shore are **commonheritage** of huamn being. Nowadays, we address ourseves in the era of Anthropocene, where enviornment are, according to Timothy Morton in Hyperobjects, 'things that are massively distributed in **time and space** relative to humans.' / The relation between human society and the ecosystem has been shifted from a binary opposition, where one conquers another, to a more interconnected and entangled network, where one was involved in the other./

In order to solve the **Problems:**... ...

we are facing vairous problems in **different scales** with water and land:/Globally, one third of the world population and a half of the coral reef are threatened by the **sea level rising** /Coastaly, **conflicts** along the littoral have never ended, where 868 wars on water and water-related resources had been recorded since last 100 years. /Water territory remines **contesting** between nations even though *UNCLOS* has been carried out./resource such as gas, fish, and mineral have been **captured** and **depleted** as soon as possible;/borders have been strenghtevned by deterrence of weapon and politic power./Lands, both shore and island, are artificially filled in, fortified, and isolated, focusing on only the **short term** political and economical profit, rather than the **long term** ecological wellness./Ships are no longer transportation of goods and culture, but armies and fear./

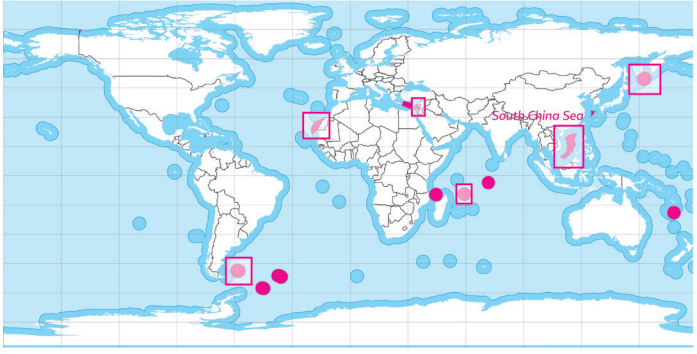
we **Propose:**... ... with **Projects:**... ...

We are designing a **adaptive system** that increase the resiliency of nature and human society / We are proposing a relation where people **cooperate** rather than conflict, **share** rather than seperate./We are constructing a mode that resources will be treated in a balanced, reasonabe, and effective way./We are introducing **emerging** technologies and materials./We are expecting our system to gradually 'grow', adapt to the **spatial** and **temporal** change.

We find the **South China Sea** would be a potential site./Differently from gound, which is in **flux**, site possesses a **certainty** /It is defined as a cultural **product** and sets of **resoureces**: isotable site is owned and owner has a set of rights./The program would potentially be **a prison**, **a free trade center**, **a research stations**, **a waste treatment factory**, **a cemetary**, **a museum**, **a co-living neighborhood**, **an educational center** ect.

that ask **Questions:**

1. What are the **extent of the site**, regarding the geological, enviornmental, political, economical, and cultural context? **2**. How should the design reflect or response to the **local**, **regional**, and **international** culture? **3**. Who is the **client**? human or marine species? **4**. How is the **spatial order** for hunman and non-hunmans interaction and seperation? **5**. Architecture worked as a media / metopher / monument? **6**. How to organize the architecture **form** related to the climate change and sea level rise in time **6**. What are the **scales** of the projects?



religious

The international complications of the dispute stretch beyond the boundaries of the **Island of Cyprus** itself and involve the guarantor powers under the Zürich and London Agreement (Turkey, Greece, and the United Kingdom), the United Nations and the European Union, along with the United States.

natural resources + colonization

The **Falkland Islands** have asked the UK to clarify the meaning of an international boundary agreement that would have the islands surrounded by Argentina's territorial waters.

The decision, which is not yet final, follows a request by Argentina in 2009 to **expand its maritime territory** to include that of the islands, known as the Malvinas in Argentina.

natural resources

Israel's maritime border divided into sections for bidding (disputed territory with Lebanon includes 1-3)
Both states claim ownership and the right to search for and harvest natural gas, oil or other **natural resources.**

colonization

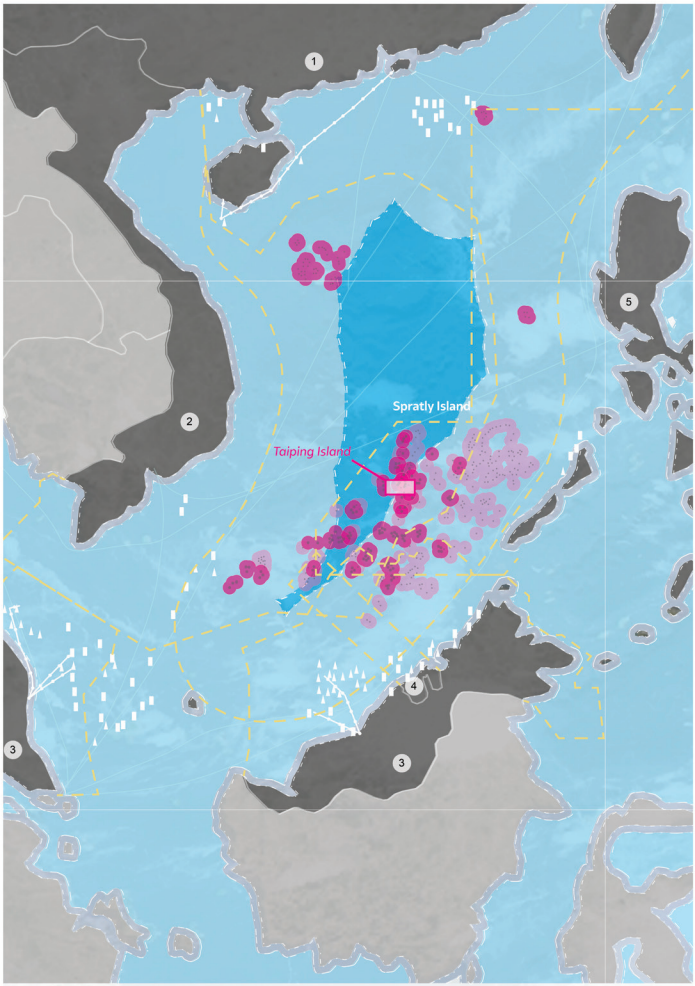
The **Western Sahara** conflict is an ongoing conflict between the Polisario Front and the Kingdom of Morocco. The conflict originated from an insurgency by the Polisario Front against **Spanish colonial forces** from 1973 to 1975 and the subsequent Western Sahara War against Morocco between 1975 and 1991.

WWII

Called the **Kuril Island** by Russia and the Northern Territories by Japan, a string of volcanic islands are at the heart of a feud between the two countries that has prevented them signing a formal World War II peace treaty.
Talks stalled for decades due to Japan's claim to the four strategic islands seized by the Soviet army in the final days of the war.

colonization

Glorioso Islands, a tiny, uninhabited archipelago in the Indian Ocean which is disputed by the two Madagascar and France.
The International Montego Bay Convention gives the authority to control 200 nautical miles of marine resources outside the territorial waters of a country, which allowed France to control a total of %70 of the Mozambique Channel.



266-
420

Transportation Junction

The South China Sea has become one of the main traffic routes between China and the outside world.

1371

Only Official

"maritime trade proscription policy" "privatization" of maritime exchanges that we have described above was suddenly interrupted from the Chinese side. Foreign trade was subsequently only possible as part of the official tribute system

1405-
1433

Marin Silk Road

Zhenghe Voyage (marinsilk road) helmed the famous treasure ships that explored Southeast Asia, South Asia, Middle East and East Africa.

15th
century

Colonization

The Portuguese, the first Europeans came to the China Seas, driven by the quest to avoid the trade routes in Asia Minor controlled by the Mamelukes of Egypt.They were followed by the Spaniards, the Dutch and only later also the British, French

1487-
1513

Free Trading

China opened somewhat to Portuguese trade; settlements were precarious until 1557, organised at Macau. The Chinese goods exported from Macau;In the other direction, the Portuguese were bringing silver, pepper, ebony, and sandal wood.

1644

Civilization

Golden Sand Temple on money island, Paracels

1909

Chinese Sovereignty

Emperor Xuantong erect stone tablets engraves with names of islands, as assertion of Chinese sovereignty.

1948

Regulization

Chinese Gov promulgates regulations on the orgnization of the office of the chief executive of the hainan district, which place islands under the jurisdiction of the Hainan District

1994

UNCLOS

Out to 12 nautical miles from the baseline, the coastal state is free to set laws, regulate use, and use any

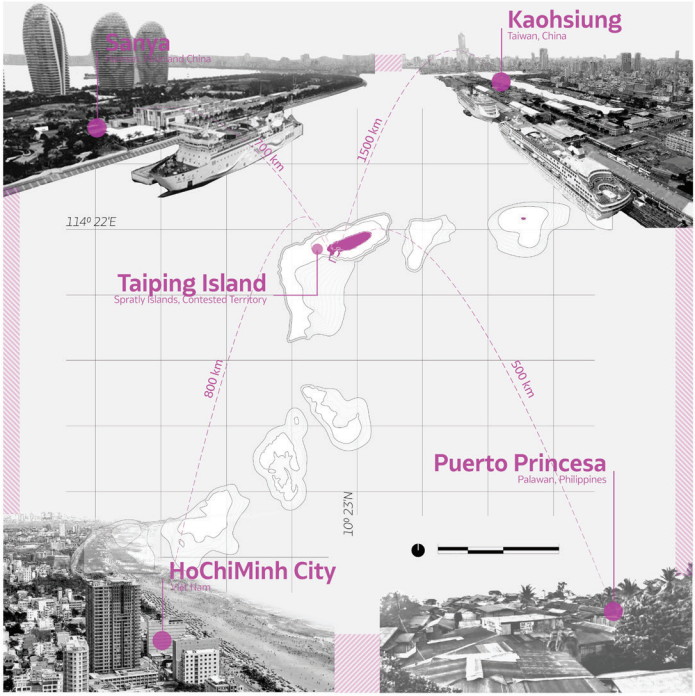
1995 -

Militrarization

Chinese government occupied Itu Aba in 1946, but did not begin constructing its airstrip until 2006, and construction finished in 2008. China is the most recent Spratly claimant to build an airstrip, which it began on Fiery Cross Reef in late 2014 after it reclaimed the former low-lying feature.

1	China	Countries w/ Conflict	Reef, Cay, Atoll
2	Vietnam	Other Countries	Major Island
3	Malaysia	Contested Claims	Gas Field
4	Brunei	12NM Territory	Oil Field
5	Philipine	200 NM EEZ	Pipes

12 60 200 NM
0 111 370 KM



how will those countries contribute to the Taiping Island collaboratively?
(China, Viewtnam, Malaysia, Brunei, Phillipine)

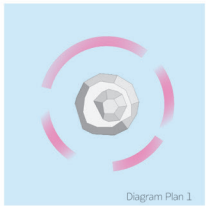
Politically
- agreement
- UN step in
- form a regional Cooperation Organization

Economically
- invest money on the island
- isalnd as a port rather than fort
- tax-free island for trading

Resource
- agree to use clean energy
- aviod overexploit

Culturally
- encourage cultural communicate
- hold festival on the island

Educationally
- send scientist and oceanologist
- museum teach the marine history
- rise the public awaerness of climate change and national conflict



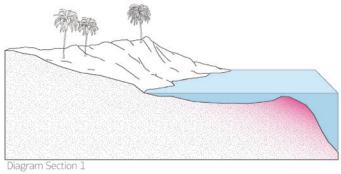
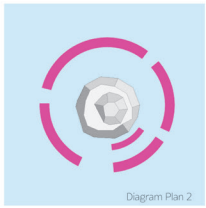


Diagram Section 1



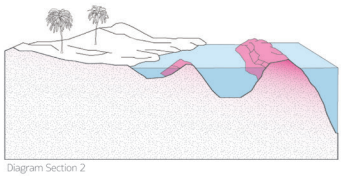
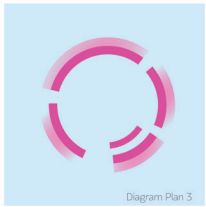


Diagram Section 2



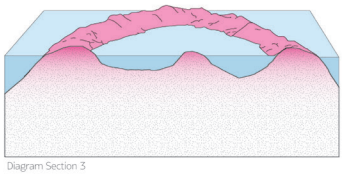


Diagram Section 3

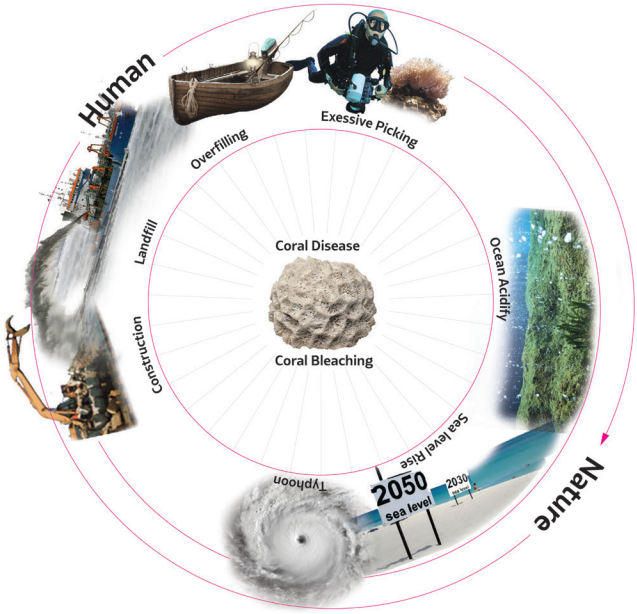
Coral reefs are generally divided into four main types:

fringing reef
The most common type and develops adjacent and parallel to the shoreline;

barrier reef
An actively growing type that also occurs parallel to the coastline but relatively further away from the shore;

atoll
A ring of calcareous reefs that is often interspersed with low sandy isles and a relatively shallow, sheltered lagoon;

patch reef
Appears as small mounds or cup-shaped structures growing on hard substrates that are cast into the lagoons of barrier reefs or atolls (most of the coral reefs around Hainan Island and neighboring islands are fringing reefs and patch reefs)



Direct Threats:

land filling

dredging

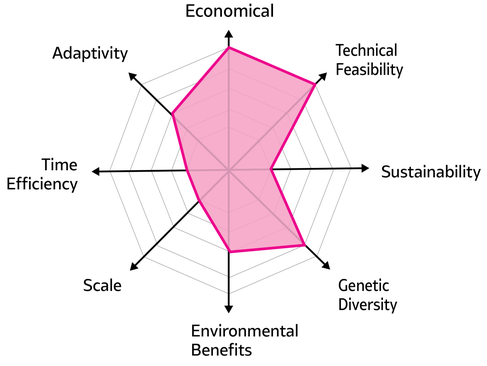
coral and sand mining for construction

Indirect Threats:

sea level rising

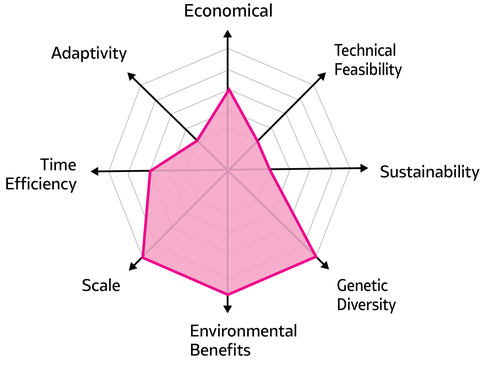
ocean acidify

typhoon



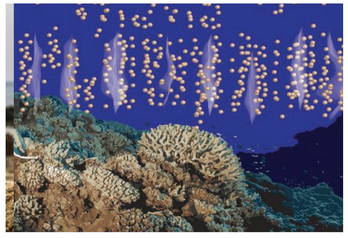
Active coral restoration

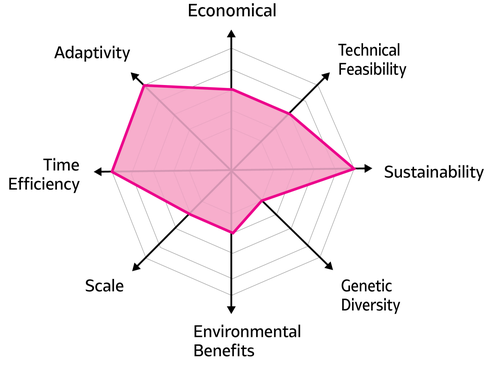
refers to projects whereby time, energy, and resources are devoted to directly increasing the coral reef health, abundance, or biodiversity. Together these three factors constitute what is referred to as the coral reef resilience.



Sexual reproduce methodology

Through artificial means to accelerate and assist the recovery of coral reef ecosystems,
Breeding is carried out by gametes or larvae produced by sexual reproduction of corals, which develop into larvae or coral individuals and are then released or sub seeded for transplantation into coral reefs.





Asexual reproduce methodology

The cuttings of corals are bred into adults in the artificial environment or in the wild, and then the adult substrate is transplanted back to the coral reef to increase the number of corals.

Economical:

Affordable material for diving and build the livable artificial environment.

Technical feasibility:

Simple training can be operated; convenient recruitment of volunteers.

Sustainability:

Low mortality, live and reproduce for relatively long period.

Genetic diversity:

Larvae comes from various coral, provides high gene diversity.

Environmental benefit:

Provide shelter for marine creatures, benefit ocean.

Scale:

Could reproduce thousands to millions type of larvae at one time.

Time efficiency:

takes how long to fully grow up.

Adaptivity:

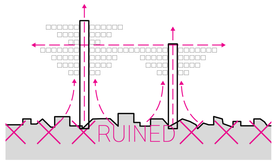
Can be raised in both natural and artificial environment.

INTERNATIONAL: 5 countries, boundaries, global awarenes; **CO-FOUNDED**: a political reconciliation; **REEF**: habitat for ocean creatures; **RESTORATION**: previous culture, small ecology, effects the globe; **RESEARCH**: co-existing, human with non-human; **EDUCATION**: marine culture, awarenes; **STATION**: demilitarization, spatial form, architectural solution.

a station to restore reef / to collect marine waste / to rescue marine creature / to observe ocean creatures / to collect samples / to research / to invite public / to educate marine culture / to live / to dive / to hold lecture / to exhibit.

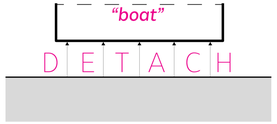
In the Air

The City in the Air, Tokyo, Japan, Arata Isozaki



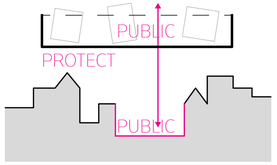
- re-settlement after war
- eracte above the ruined city
- tree shape
- vertical elements as circulation

Villa Savoye, Le Corbusier



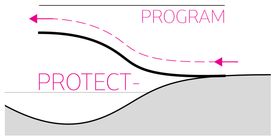
- lifted up from the clear site
- light weight
- as a "boat" metaphor
- vertical elements as structure

Sharp Center for Design, Alsop

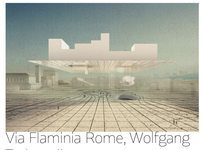


- lift up above the urban landscape
- protect the existing
- create open space below
- vertical elements as structure and circulation

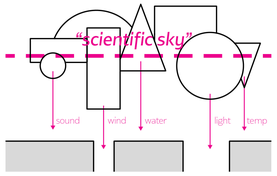
Wilde park, NL architects



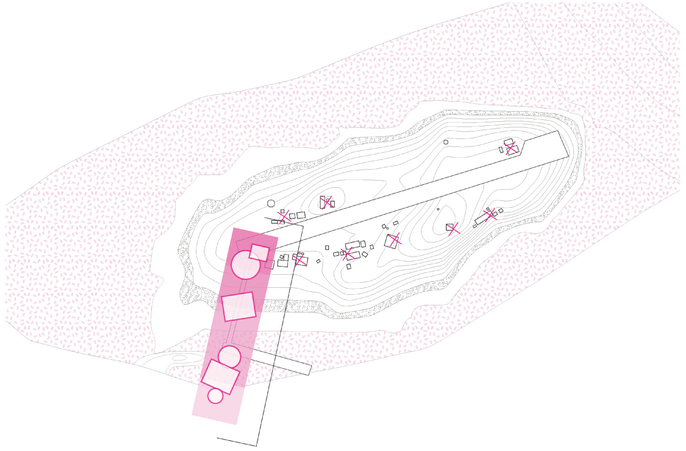
- flip the "house" type upside-down
- curve up from landscape
- become a shelter for underneath
- vertical elements as sturcture

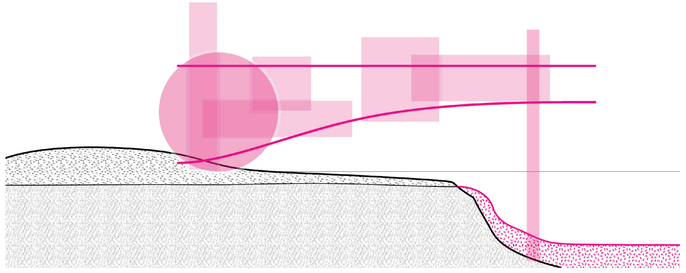


Via Flaminia Rome, Wolfgang Tschapeller



- a "new sky" as artificial enviornment
- both physical and virtual space
- responese to the exsiting landscape
- variety of climate
-





Clients:

<u>long term:</u>
researchers: 30
securities: 5
officers: 5
workers: 10
coral reef: over 1000 sq m
other species

<u>short term:</u>
sailors: 25
students: 100
tour guides: 4
tourists: 100 max.

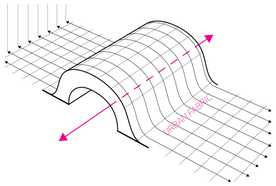
Programs:

observing platform
research laboratory
library
sample archiving
conference center
exhibition space

living space
dinning space
office
park / gym
other amenities
port

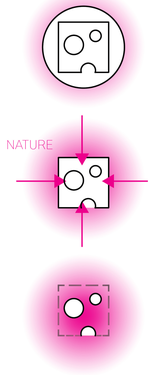
Underground

Fish Market, MVRDV



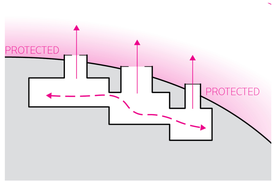
- a public program nuder the urban fabric
- connectivity along one axis
- reconsile two disimilar programs
-

UCCA Dune Art Museum, OPEN Architects



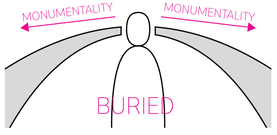
- timeless-ness
- building buried by sand and plants along with time
- an underground shelter, "intimate to the body and soul"
- connected with light, heat, wind, view, water

Chichu Art Museum, Tadao Ando

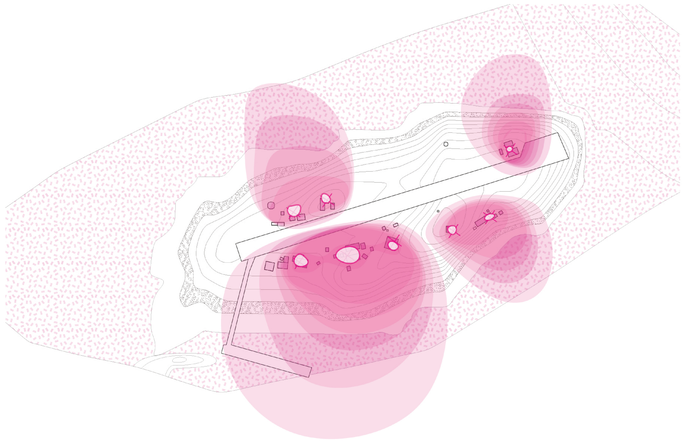


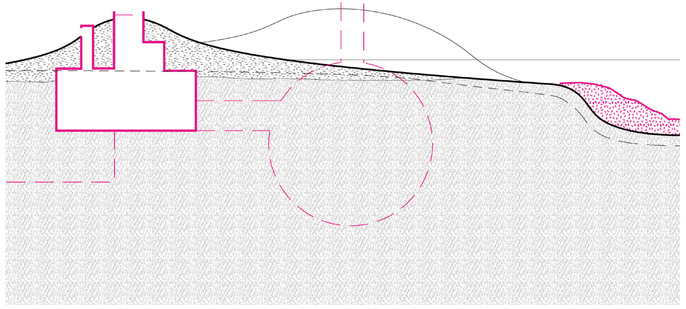
- underground
- preserve the natureof the island
- embed into the landscape
- visually conect to the sky and the landscape

Makomanai Takino Cemetery, Tadao Ando



- visible and invisibility
- siliency
- monumentality
-





Clients:

long term:
researchers: 30
securities: 5
officers: 5
museum workers: 20
other workers: 20
coral reef: over 1000 sq m
other species

short term:
sailors: 15
students: 200
tour guides: 16
tourists: 200 max.

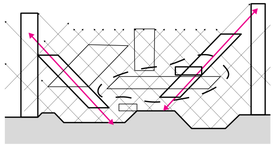
Programs:

history museum
marine culture museum
monuments
library
sample archiving
theater / lecture hall

living space
dinning space
office
park / gym
other amenities
port

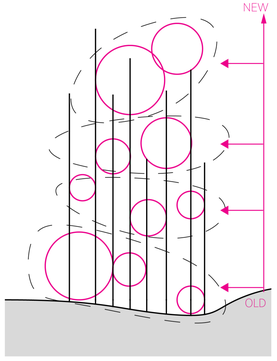
Vertical

Plug-in City, Archigram



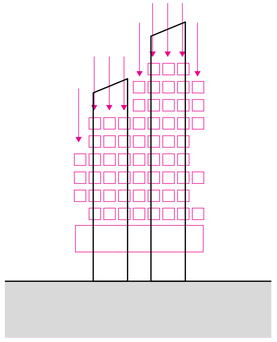
- light weight infrastructure
- modular technology,
- mobility through the environment,
- space capsules
- mass-consumer imagery

Seeds of Life, Mekano Studio

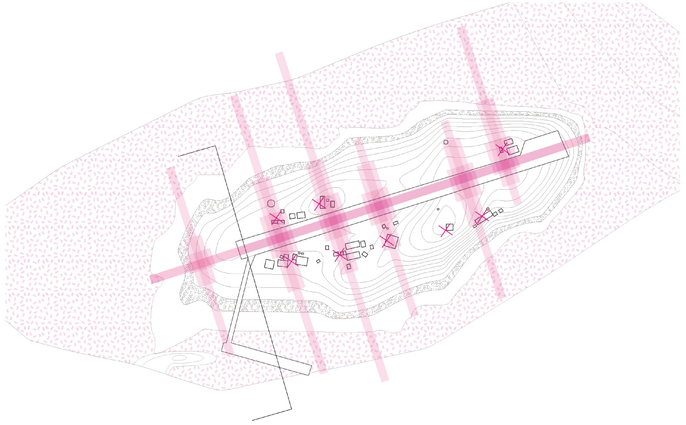


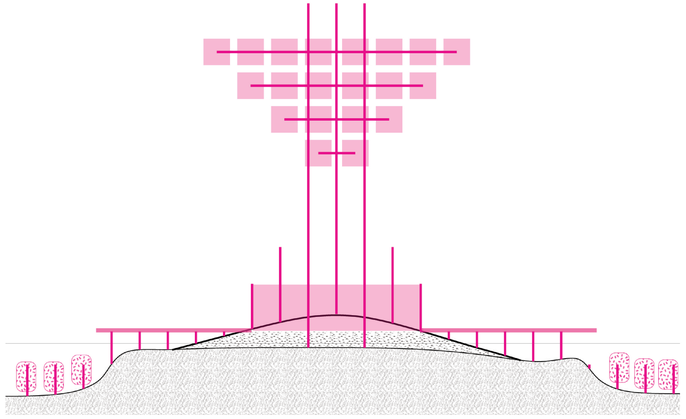
- modular
- build up vertically
- develop along with time
- human – plants – Animals
- design for both human and birds, and greens
- 'garbage city'
- homeless people settlement
- co-exist with waste
- reviving the enviornment

Nakagin Capsule Tower, Tokyo, Japan, KISHO KUROKAWA



- central core
- modular
- metabolism
- transcultural collaborations
- post-war social transform
- mobility and flexibility





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residences: 100
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officers: 15
workers: 15
doctors: 2
coral reef: over 1000 sq m
other species

<u>short term:</u>
sailors: 25
students: 100
tour guides: 4
tourists: 100 max.

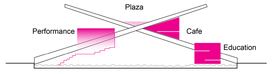
Programs:

living space
hotel
monuments
library
study room
health center
theater

dinning space
office
park / gym
other amenities
port

Horizontal

11th Street Bridge Park, OMA

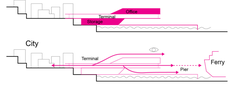


- The design of the bridge pulls the two ends of the bridge upward to form an X-shape, providing shelter for programs.
- A literal intersection and a multi-layered amenity for both sides of the river.

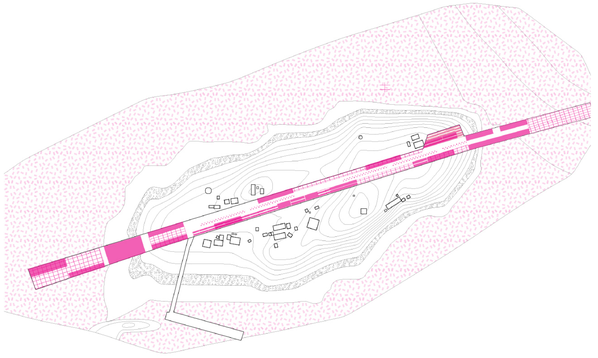
Xuhui Runway Park, Shanghai, China, Sasaki Isozaki

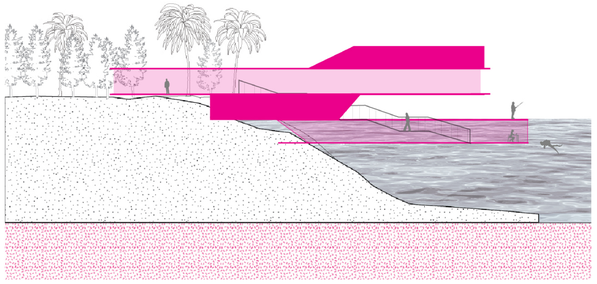
- Formerly a runway for Longhua Airport, the park's design scheme mimics the motion of a runway,
- diverse linear spaces for vehicles, bicycles, and pedestrians by organizing the park and the street into one integrated runway system.

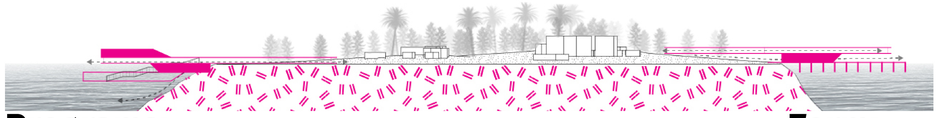
Yokohama Port, Japan, Farshid Moussavi Architects



- the terminal seamlessly emerges from the neighboring Yamashita and Akaranega Parks to make one uninterrupted, universally accessible urban parkscape.
- Connecting the three levels are a series of gently sloping ramps, which the architects decided were more effective than stairs.







Public Gathering
Vegetation
Yard
Enclosure

Programs:

Underwater lab: for coral samples and documentation.
Museum: Cantiliver to connect land and water, extend the view; see through the reef lab
Meeting room: for countries to hold national meetings

Form:

Extending and layering the old airstrip to create a dimentional horizontal sapce for different uses.

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