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ARCHITETTURA E PAESAGGIO
ARCHITECTURE AND LANDSCAPE
ITALIA/GIAPPONE FACCIA A FACCIA
ITALY/JAPAN FACE TO FACE

3. Prove di progetto

3. Experimentation via projects

3.3 Progetti da Chiba. Corso di Progettazione Urbana e dell'Ambiente III anno, Corso di Tesi di Laurea IV anno, Department of Urban Environment Systems

di Masaru Miyawaki

3.3 Projects from Chiba. 3rd Year Urban and Environmental Planning Course 4th Year Graduate Thesis Course, Department of Urban Environment Systems

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1 Introduction. "Canal Village": A New Landscape for Shin-Kiba. Shin-Kiba is located in the eastern part of the Bay of Tokyo. "Kiba" is composed of two ideograms that literally mean "*the place on the sea that stores wood for construction*". Kiba was initially founded during the Edo Period, when the city began to expand towards the east. In 1970 Tokyo expanded further towards Kiba, exceeding its borders and resulting in the foundation of Shin-Kiba.
Wood is the primary material of both traditional and modern construction in Japan. However, various events have led to the creation of a scenario that hinders the economy of wood production. Fire safety and protection laws now prohibit the use of wood to build modern structures, such as shopping centres. Since the 1980s the importation of lumber has grown rapidly, leading to the destruction of Japan's lumber economy. Successively the exportation of lumber was also prohibited in order to preserve the economy of third world nations. These and other factors have influenced the economy of Shin-Kiba, relegating this once florid area of Tokyo to almost total abandonment.
Our research took place in two phases: the first is a theoretical approach and the second a design exercise. The territorial research of the Municipality of Koto was analysed in historical terms and used as the topic of the graduate thesis; the design exercise was part of the 3rd year studio. The latter focused on the requalification and functional renewal of Shin-Kiba. The area was radically reconsidered through the design of a future "Canal Village" for Tokyo. The ultimate aim of the study was the definition of the "Canal Village", based on the preservation and re-launching of the wood industry and the valorisation of Shin-Kiba's particular marine context. An important focus was placed on the design of access to the canal and the use of wood. For this reason there is a large forest in the centre of the project site. The project focuses on the integration of ecological, landscape, industrial and urban planning requirements and the students' proposals courageously promote new programmes and new landscapes.

2 Territorial Research. Hayato Kondo with Prof. Masaru Miyawaki, Graduate Thesis Course. The History of the Urban Blocks, Streets and Canals in the Municipality of Koto.
This research was used to analyse the history of the urban blocks in the Municipality of Koto, Tokyo through a critical assessment and study of maps from the Edo Period in 1673 to the present.

The History of the Urban Blocks. Characteristics of the Northern Area
The vast majority of the city blocks were constructed between 1925 and 1937 (green on the map). 57% of the blocks were reconstructed during this period, which immediately follows the large earthquake that hit Tokyo in 1923. Only a few blocks remain from the Edo Period (brown and orange on the map). The new blocks (purple) are fewer in number than those built previously.

Characteristics of the Southern Area. The urban blocks in the southern area are generally wider and more extensive than those in the northern area. On average, the size of the blocks built between 1973 and 1991 (grey on the map) is 5.4 times greater than those built between 1673 and 1779 (brown on the map). It is also possible to observe a large area that was never used as buildable land, and which remains free of any type of construction to this day.

The History of the Streets.

Characteristics of the Northern Area. In the northern area, the majority of the streets were laid out between 1925 and 1937 (green on the map). These streets were opened after the great earthquake that hit Tokyo in 1923. Some of the patterns of historical axes, built between the 17th and 19th centuries (black, brown, red and orange lines) can still be found in the remaining areas along the Sumida River and the canals. Some of the streets existing toady are widenings of historical axes (marked with two colours).

Characteristics of the Southern Area. The majority of this area is composed of artificial terrain, "produced" during the 20th century. Though various lands were "produced" before the Second World War, the use of the land was only decided many years after the end of the War.

The Disappearance of the Canals and Waterways. The Municipality of Koto was once known as "Water Town" due to its many canals used for to transport people and goods, in particular wood products. These waterways have, in recent years, been diminished and in some cases transformed into paved urban and extra-urban roads.
The disappearance of the canals was analysed using historical maps that made it possible to define the history of the transformations that have affected the waterways.

Characteristics. Many of the canals have been lost. During the transfer of the primary urban functions from the city of Kiba to Shin-Kiba, between 1955 and 1982, many water basins – used to store construction materials – were no longer used and their abandonment led to their being filled in and lost forever.

3 The Project for the New Shin-Kiba. Site Visits and Concepts. The Identity of Shin-Kiba. Shin-Kiba was once the centre of production for wood products; however, the vigour and vitality of this part of Tokyo were lost during Japan's period of industrial decline. The large blocks left after the decommissioning of various factories did not help to define an attractive spatial organisation for local residents, who see these large spaces as foreign to their actual needs. Some of the warehouses, once used to store and cure wood, are now used as warehouses for other businesses.

In Japan, 67% of the national landscape is composed of forests. Notwithstanding that 40% of this figure are artificial plantings, thus useable as construction materials, the national wood industry is in serious decline and depends to a great deal on imported wood.

Shin-Kiba, once home to a flowering community of artisans and carpenters, now boasts only one. Up until 1970, Shin-Kiba represented the designated space for the storage of wood, and was intimately linked to this material; with the decline of the wood industry, the identity of Shin-Kiba has also been almost completely lost.
The future revival of the area depends on the appeal of Japanese wood products in the rest of the world. This will require a centre for the promotion and publicising of Japanese wood. We feel that it is necessary to focus on the conservation of a crafts-oriented culture, and establish the intellectual bases that allow for the construction of a sustainable society, that is long-lasting and capable

of producing new values. These values must allow for the production of new skills that make use of innovation and tradition in design, producing an added economic value that will lead to the development of a dynamic economy. For this reason we imagine the opening of technical schools and research and information centres that investigate the culture of wood. This is also seen as an opportunity to re-employ those that have lost their jobs, as well as for the reuse of the cultural patrimony represented by the retired elderly classes.

Project Ideogram. The precise location of road and rail transportation networks creates an equal and thus qualitatively distributional division for the constitution of a new Master Plan for Shin-Kiba organised along the north-south axis.

We believe that the design and construction of a new axial structure will have positive effects on the new Shin-Kiba landscape and have preferred, rather than focusing on an orthogonal structure, to use curves, inspired by the forms of aerial and aquatic flows, typical of the landscape of Shin-Kiba. The design of this new landscape was created by Professor Masaru Miyawaki.

The curved axes allow for the integration and embracing of new projects, and also help to create new vistas, once latent and not clearly expressed. These axes permit water to organically enter the spaces of the city and to contribute to the dynamics of urban life.

1. Infrastructures. In order to maximize accessibility to Shin-Kiba we have studied various means and typologies of transportation. Of these, we believe that the system of water-based transport, known as the "*water bus system*", is capable of playing a primary role in guaranteeing connections.

Particular attention has also been focused on the design of pedestrian access: this has been identified primarily along the canals in order to guarantee the amenity of the city.

2. The Landscape of Design. The new city is designed using curved axes, along which many different projects are defined and connected in a unitary fashion that makes use of a large-scale landscape of representation. The centre of the project features a planted area that will become the green lung of Shin-Kiba: the new forest represents the symbol of the rebirth of the city. Systems of recycling and the use of renewable energies have also been considered in the development of the project.

3. Industry and Constructions. Both the Japanese national forestry industry and the wood industry must be rehabilitated and reinforced in the short term. In fact, we believe that it may have positive effects on both the economy and the environment. Shin-Kiba is the site where the wood industry was originally and appropriately located. The project includes the activation and opening of various institutes and research centres that may help to promote the economy related to forestation.

4 Projects. Naruki Eriko, "The Identity of Shin-Kiba". Zoning. The area in which I worked is composed of islands located in front of the train station. Various types of islands were designed and identified by waterways and canals. The programme is divided into two main typologies: residential and manufacturing. The manufacturing area contains, primarily, new artists' ateliers and workshops for woodworking. The production of wood has been divided by typology of production and dimension. With regards to the production of wood, I feel that it is possible to produce not only the products traditionally worked in Shin-Kiba for residential construction, but also utensils and furnishings for the home.

From the station it is possible to reach one of the wood information centres; these structures work in collaboration with the professional wood working schools. The latter are assisted by training centres that are located in the calmest area, along the exterior of the settlement. In the area dedicated to the ateliers two plazas and a connecting axis have been defined. The residential area has been "fused" together with the atelier area, allowing residents a direct and close relationship with the water.

Water-based Transportation. As mentioned, the water-based system of transportation is necessary to the existence of Tokyo. It is differentiated in two levels. The first has to do with the so-called "local embarkations" and the second, on the other hand, is similar to the system of waterbuses in Venice, Italy.

The "local embarkations" have access to the waterways that cross the residential site and reacquire a minimum width of 6 metres. While the water bus line is designed for longer movement, capable of easily reaching the international airport of Haneda, the Tsukiji fish market or the central part of the Bay of Tokyo. The boats will produce a certain degree of attraction that will help to increase water-related activities and promote a more comfortable residential environment. In fact, this offers the most beautiful views of the landscape, composed of water, parkland and artists' ateliers. All of the canals are equipped to handle eventual problems faced by ships, and can be used as emergency exits via water.

The Transportation Plan. In this area the choice has been made to limit private vehicles to a minimum. There is only one vehicular street for each of the principle north-south and east-west directions. In fact, mobility is guaranteed by a street that connects with the areas that are home to the small wood factories. However, as mentioned, transport is almost completely water-based. The project also includes pedestrian and bicycle paths, where the use of wood can restore a sensation of proximity to nature. **The Landscape Plan.** Each block contains a percentage of parkland, public spaces and pools sufficient for satisfying the needs of local residents. The residential plan calls for the use of wood to construct the buildings. This helps to better explain how wood can be used in civil constructions as well as providing a concrete example for those who visit Shin-Kiba. It thus becomes a cultural tool of indubitable value.

Maintenance does not require specialised labour, and can thus be entrusted to the students of local centres and the ateliers. This would allow for the creation of a socially sustainable and cooperative economy.

All of this results in the observation that the recovery and promotion of the traditional Japanese landscape requires a re-examination of fire prevention regulations.

In fact, they have a determinant effect on the use of materials that do not belong to the traditional Japanese culture of building, as well as on the disappearance of the traditional landscape with its wooden houses.

Masaya Suzuki, "Eco.Lab.Island". There are essentially two main characteristics of the "Eco.Lab.Island" project: the first has to do with the creation of a

new landscape for Shin-Kiba that rotates around the experimental research centre for the use of wood. The second has to do with the design of an open space for learning and the exchange between nature and man. I believe it is of fundamental importance that we create a cultural awareness of materials and know-how.

Lab.Campus. The form that inspires the project is that of a tree. This has been used to give form to an artificial hill, the interior of which contains different constructions and buildings: the research centre, a cooperative effort with the university, and a local business centre. The objective is that of managing and attracting investments that assist the two sectors to grow and expand together.

Organic Farming. The project includes natural spaces that introduce the concept of *"agricultural forestry"*. This process is a catalyst for a natural cycle that takes advantage of all of the natural resources present in the local territory.

Open Community School. The project also includes a complex structure that will contain an elementary school, a junior high school and a high school, together with a *"community centre"*. It is hoped that the creation of these spaces for the entire community can facilitate communication between subjects from different generations.

It is my belief that education is the principle factor that must be shared and promoted.

Education Cottages. The residences will be divided into two types: one for students and one for workers. These structures can also host occasional visitors. The entire structure moves towards the promotion of a culture that finds its meaning in ecology.

For this reason the project also features an area destined for fishing and oceanographic research. Prior to the construction of the artificial islands in the Bay of Tokyo, there were various cultivations of algae and seafood. These cultivations can be restored and used as educational tools for local citizens to experience marine culture. The project thus focuses attention on the conservation of natural biotypes, making it an active example of environmental education.

Energy Management and Landscape Design. "Eco.Lab.Island" will be supplied by alternative energy sources: wind, solar and thermal energy. The project also includes a waste treatment facility. These actions are aimed at creating a sustainable environment.

Shohei Fujita, "Shin-Kiba Seaside Houses".

Background. In recent years there has been an increase in the population living in the central areas of Tokyo; this is an inversion of previous trends and many citizens are migrating to the centre of the city. This migration regards primarily the 23 special municipalities of Tokyo. The Municipality of Koto, home to Shin-Kiba, has the highest percentage of growth and the increase forecast for the next 20 years is a further 10% of the current resident population.

Shin-Kiba possesses a particular value: it is one the areas with water lines that connect with the Bay of Tokyo. Given that the area was the site of woodworking and where construction materials were stored in marine basins, there is almost total access to the ocean. What is more, this area is very close to the urban centre and there are many facilities and complexes dedicated to entertainment activities. Its favourable location makes the area particularly desirable in geographic terms.

Project Concept. There is a level change related to the low and high tide of approximately 1.60 metres. This difference allows for the design of a new type of residence that favourably expresses the variations in the seasons.

The "Shin-Kiba Seaside Houses" area includes a park, a nursery school and a library, together with two other schools: an elementary school and a high school.

Kazuki Kakegawa, "Smile-Biz".

Viability System. The areas destined for office use have been located near the Shin-Kiba train station. The vehicular and pedestrian ways have been designed using curved lines that connect the residences for the elderly with the shopping centre and the station. In order to design these curved lines, a study of the traditional agricultural landscape was made. The forms selected make reference to the river course and the form of a leaf. These sources of inspiration have an innovative effect on the panorama of Shin-Kiba.

Terraced Fields. The inhabitants of Tokyo will become the new owners of terraced fields and the direct mangers of these agricultural settlements. They are not only the space of the production of primary goods, but places of study and research that are witness to the interest and involvement of various universities interested in innovative development, both in terms of horticulture and the study of architecture and the landscape.

Office Town. The project also includes an innovative plan for the management of working environments. Businesses and companies are invited to focus on new strategies for eco-friendly development and to move their headquarters to Shin-Kiba in order to become true promoters of environmental strategies.

The park in the southern part of the site connects the Office Town with the terraced fields and served as the connecting element between these two (only) apparently different realties.

Building Regulations and Heights. This part of Shin-Kiba will be subject to a new law for the control of building heights: this will allow for the maintenance of a sort of visual democracy. In fact, the skyline of the village will gently slope towards the sea and allow all residents to enjoy a view of the landscape. This regulation will allow for the introduction of a project that is integrated with the landscape, built areas and natural spaces.

Makoto Kanke, "New Shin-Kiba Station".

The Shin-Kiba station connects three different rail and subway lines: the Keiyo, the Yurakucho and the Rinkai. It is thus a nerve centre and, as a result, a strategic node. Accessibility is good and the station is heavily travelled. However, only a few travellers actually exit at the station. This means that only a few can truly enjoy Shin-Kiba's maritime landscape. This information has led to the design of a new and more attractive way of allowing travellers to enjoy Shin-Kiba's landscape. Given that it is the city of wood, the new station will be designed primarily using wood produced here, making it the true 'business card' for the city.

The new station is located in the northern area, while the rail lines extend in the east-west direction. The arrivals and departures platforms will be

located adjacent to the sea, in the southern part of the station. In front of the station the new system of canals will be used to create the new landscape of Shin-Kiba.
The station will be built using wooden arches that gradually expand, changing the texture of the roof. The wooden arches are designed by taking inspiration from the form of waves. Their undulated form recalls those of water.
Tomoki Hiramoto, "Seafront and Diversity". The northern part of the Shin-Kiba area was renamed "*Yumenoshima*", which means "island of dreams". In reality it sits on an artificial terrain that, from 1950 to 1960, was the site of garbage collection and the waste produced in the metropolitan area of Tokyo.
After "*Yumenoshima*" reached its maximum capacity, the collection of waste was moved to the southern part that surrounds Shin-Kiba in the district of Wakasu. In 1990 "*Yumenoshima*" was transformed into a recreational centre and urban park.

It is composed primarily of perpendicular streets that create a grid. Even if the impression is that of broad avenues, they maintain a human scale. While close to the sea, there is no impression of a dialogue between the two: this leads us to imagine that the this condition is not maximised to its full advantage. For this reason I imagine a reconnection between the southern and northern parts – currently divided by the rail lines – using water-based transportation routes.
In addition, the project includes an increase in the collection of waste: there is thus a greater level of attention focused on the recycling of waste in order to benefit the environment. These actions will be supported by the design of a sports centre and a "*water pavilion*" that will allow the ocean to enter into the mainland. Using a metaphor, this will allow the inhabitants to "touch" the sea, to feel and truly experience it. This is because there is a real need for direct contact with this element of the environment.
Kana Asano, "Floating House Life".
Tokyo's Hotels. There are many hotels in Tokyo, but only 12 of them are located along the Bay of Tokyo. While they are skyscrapers with a stunning view of the ocean, few of them have any real contact with the water.
People Attracted to the Sea. The City of Amsterdam has over 2,200 legally registered houseboats: true floating houses. Originally these boats were houses for citizens with low income, however, today there is a notable change in their inhabitants. Many people are attracted by this lifestyle and recently there have been many new requests for houseboat licenses. They are not easy to obtain; in fact, there is a precise request made by the City of Amsterdam: you must agree to take care of the natural maritime environment.
Characteristics of the Design Proposal. Shin-Kiba is located in a strategic point with regards to transportation. With the current connections, the distance between this area and the most frequented tourist areas in Tokyo is less than 30 minutes. If the canals and waterways were used as well, it would be easy to connect this part of the city with Fukagawa, Tsukuda, Hamarikyu, Sumida and Shinagawa. This would represent the organisation of the major port centres in the rich maritime system that flows through the metropolitan area of Tokyo.
The System of Transportation and the Design Plan. The method of accessing the Boat-House is limited exclusively to the use of the waterways and thus by boat. In order to give form to the layout of the new hotel settlement, two principles have been considered: privacy and distance and accessibility to the site. This area is protected and covered by the natural vegetation of trees; there is also a park that can be used for physical exercise and relaxing.

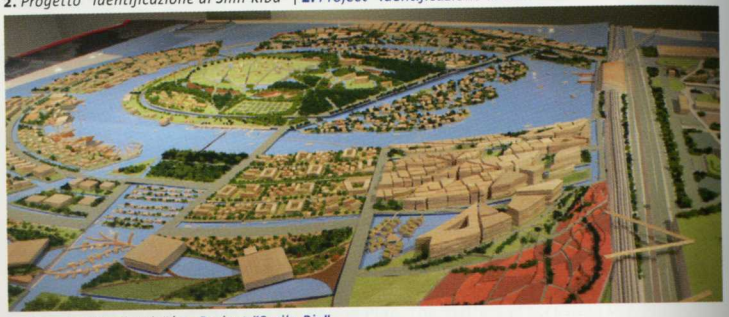
Each dwelling unit is divided into three parts. The houses are designed specifically to increase and ensure contact with the water. Each house thus features a private deck.
The rooms are divided as follows:

Luxury: 66.3 m2 + Garden 91 m2
Standard: 46 m2 + Garden 91 m2

A dense wall of trees divides the houses and protects their privacy amongst the various atolls in which the houses are scattered. The trees also separate the houses and vehicular traffic.
In addition to the fact that each residence has its own "floating garden", there is also a large "*leisure park*" where guests can serenely pass their free time.
Passive Solar System. In consideration of environmental issues the residences are equipped with a system for the production of passive solar energy. Given that the houses are isolated from the mainland, each will require its own autonomous power supply. The houses create a mixed "low-rise building area": partially in reinforced concrete (the foundations) and partially in wood, worked in Japan by specialised local labour.
Sporting activities such as fishing, or recreational activities such as barbeques, boating trips or teatime in the garden enrich the relaxed nature of the site and the value of this tourist area.
Given that the islands are subject to tidal movement, the level of the units fluctuates. This reduces monotony and increases the interesting qualities of this built landscape, presented as an alternative to the luxury tourist residences found elsewhere in Japan.
The sea, wind and nature help to construct a new landscape within which to pass unforgettable time, making the heart the true foundation of these emotions.

1. *Partecipanti dalla Chiba University e loro plastico del progetto* | **1.** *Students of Chiba University and their project model*

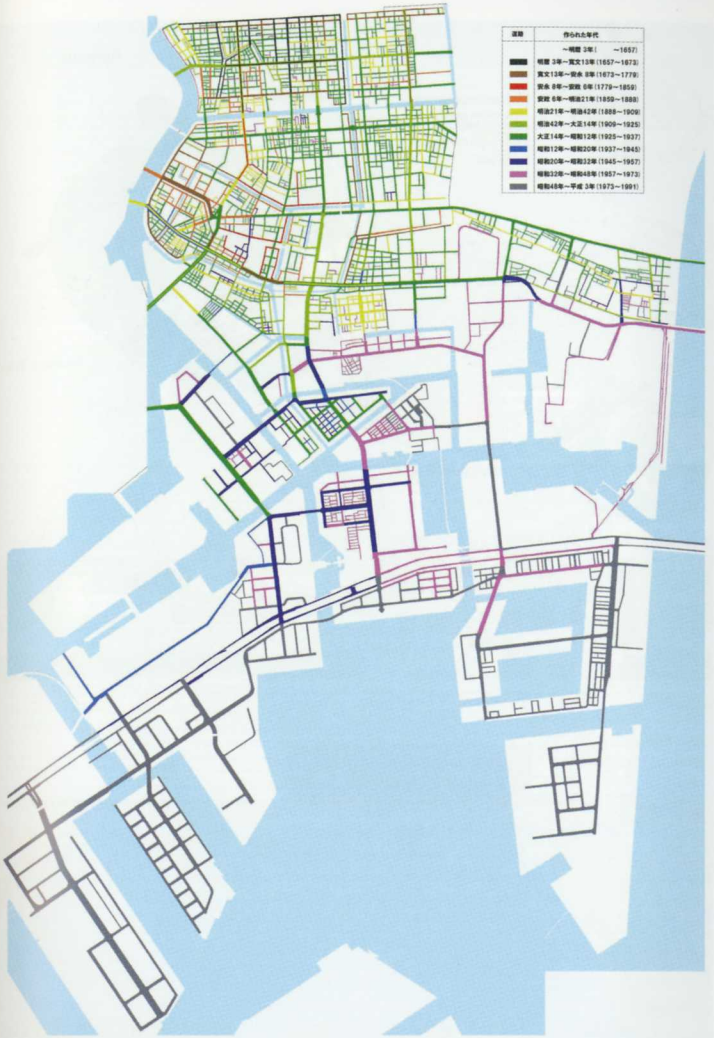
2. *Progetto "Identificazione di Shin-Kiba"* | **2.** *Project "Identificazione di Shin-Kiba"*



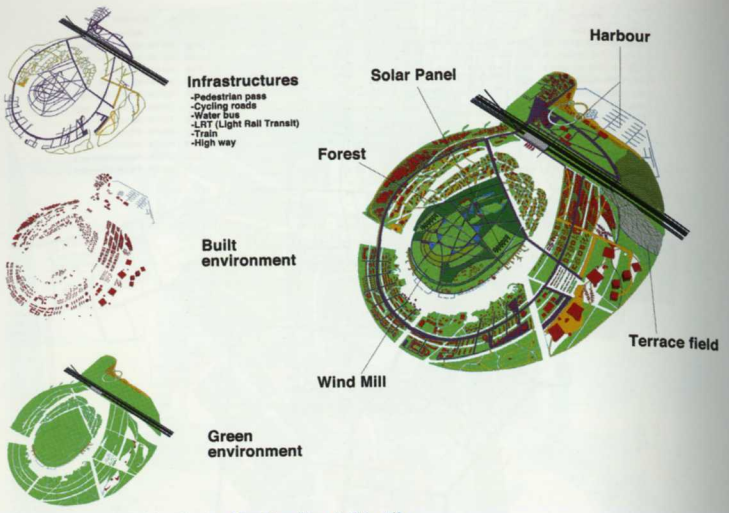
3. *Progetto "Smile-Biz"* | **3.** *Project "Smile-Biz"*

4. *Proposta per il Master Plan di Shin-Kiba* | **4.** *Shin-Kiba Master Plan*

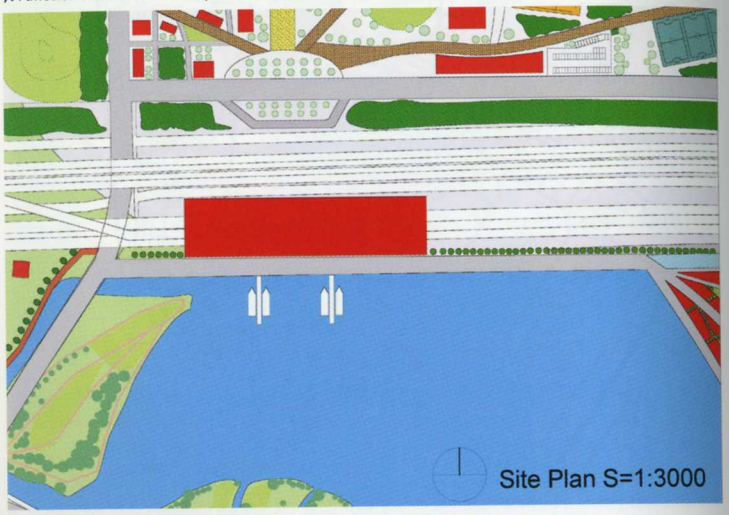
5. *Storia degli isolati urbani e delle strade al Comune di Koto in Tokyo* | **5.** *History of urbanism and streets of Koto in Tokyo*



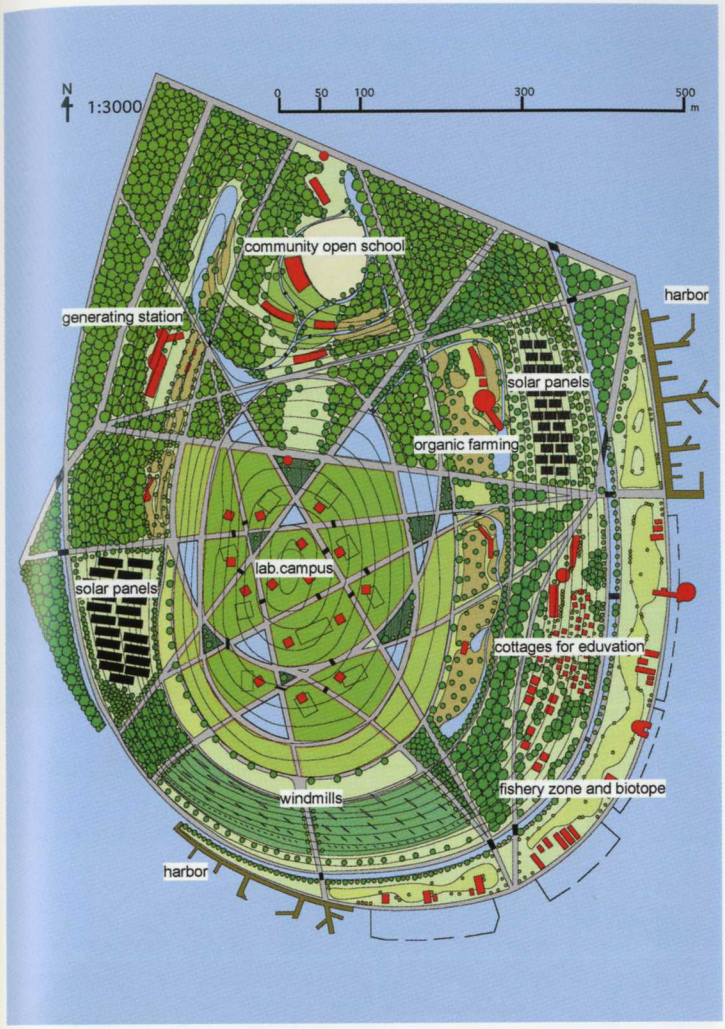
6. *Storia degli isolati urbani e delle strade al Comune di Koto in Tokyo* | **6.** *History of urbanism and streets of Koto in Tokyo*



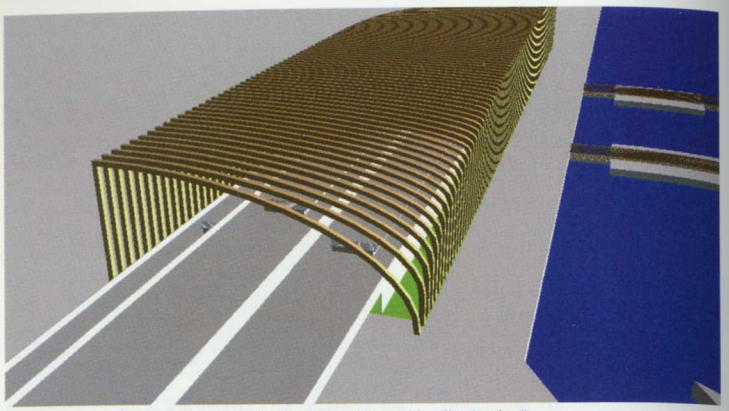
7. *Function Plan di Shin-Kiba* | 7. *Function Plan di Shin-Kiba*



8. *Progetto "New Shin-Kiba Station"* | 8. *Project "New Shin-Kiba Station"*



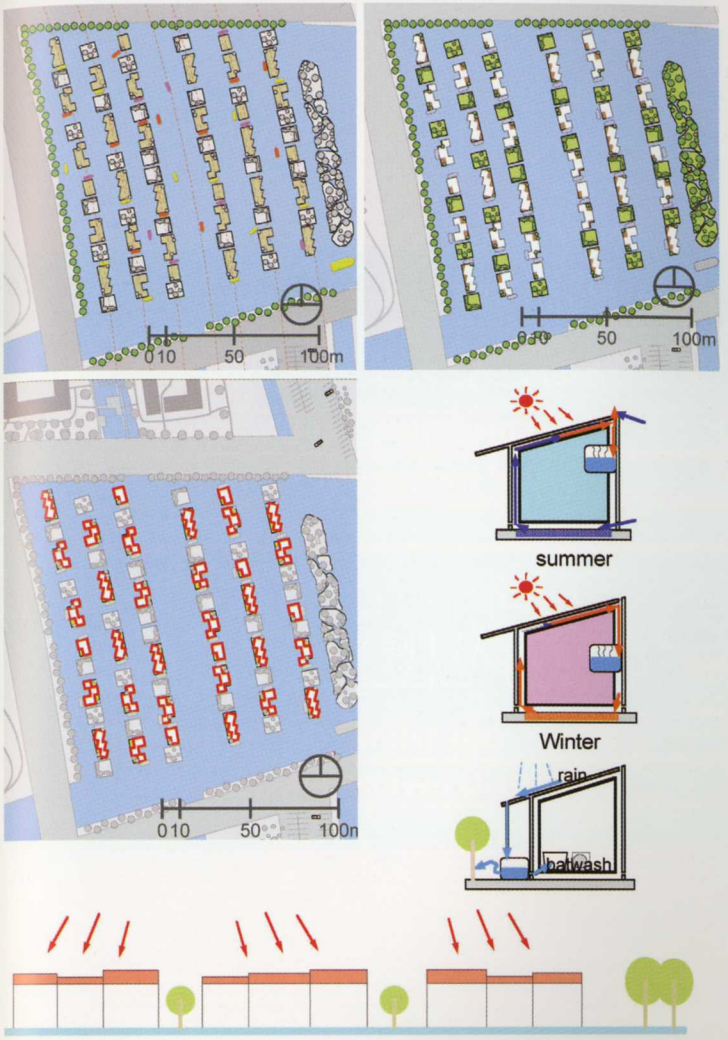
9. *Progetto "Eco.Lab.Island"* | 9. *Project "Eco.Lab.Island"*



10. *Progetto "New Shin-Kiba Station"* | **10.** *Project "New Shin-Kiba Station"*

11. *Progetto "Fronte a mare e diversità"* | **11.***Project "Fronte a mare e diversità"*

12. *Progetto "Fronte a mare e diversità"* | **12.** *Project "Fronte a mare e diversità"*



13. *Progetto "Floating House Life"* | **13.** *Project "Floating House Life"*