ITU LANDSCAPE ARCHITECTURE |

STUDIO REPORTS

2021-2022 FALL SEMESTER | LANDSCAPE DESIGN IV

prof. phd. gülşen aytaç - res. asst. gizem aluçlu - seçil güçvar - meltem lermi - özge kantar - irem güven - marina ştiroi - yağmur solaz - damla solaz - aysima özen - saliha aydoğar - beyzanur seferi - sevra tuna - medya atış - zeynep berfu yılmaz

İstanbul Teknik Üniversitesi Mimarlık Fakültesi Peyzaj Mimarlığı Bölümü
Taşkışla, Taksim 34437 | İstanbul

Telefon: +90 (212) 2931300 ext.2808
Fax: +90 (212) 2514895
E-posta: peyzajmim@itu.edu.tr

Editörler/ Editors:
Gülşen Aytaç
Gizem Aluçlu

peyzaj tasarımı IV
landscape design IV

PEM 411E

Yürütücüler/ Lecturers
Prof. PhD. Gülşen Aytaç
Res. Asst. Gizem Aluçlu

WATER & the city

Ayamama Corridor

Today, we are experiencing the effects of climate change more and more. We constantly follow the flood and fire news on every continent. With these effects, changes in the water cycle are reflected into the water bodies as floods and expose these areas to many risks. Cities have begun to be designed to be resilient by being affected by the variability of water levels. Ayamama River, which is adjacent to many natural water bodies such as lagoons and the Bosphorus on the West Marmara Coast in Istanbul, Turkey, will be evaluated in terms of resiliency based on flood risks within the scope of the studio. At the scale of the river basin, the flood risk levels, usage differences, necessary buffer zones, time and disaster management, and landscape design will be discussed and future projections will be recommended.

@MIT Architecture

Watershed Urbanism Workshop

MONDAYS

4 OCTOBER INT-RO-DUC-TION

general talk about floods

OCTOBER 7, 2021

-Causes of flood
-Representation techniques

RAFI SEGAL TALK! 16.00 (GMT +3)

WORKSHOPINTRODUCTION

OCTOBER 11, 2021

-Natural causes of flood
-Site analysis

OCTOBER 14, 2021

-Human causes of flood
-Site analysis

OCTOBER 18, 2021

-Natural and human causes of flood
-Site analysis

21 OCTOBER @STUDIO WORKSHOP DAY 1

22 DAY 2

23 DAY 3

24 DAY 4

*site visit

25 OCTOBER JURY 1

OCTOBER 28, 2021

- 1/2000 Scale Masterplan
- Overlapping Physical, Social, Economical Layers

NOVEMBER 1, 2021

- 1/2000 Scale Masterplan
- Understanding the Green and Blue Infrastructue

NOVEMBER 4, 2021

- 1/2000 Scale Masterplan
- Understanding the Green and Blue Infrastructue

NOVEMBER 8, 2021

- 1/2000 Scale Masterplan
- Understanding the Green and Blue Infrastructue
- Representation Techniques

NOVEMBER 11, 2021

- 1/1000 Scale Work
- Representation Techniques

NOVEMBER 15, 2021

- 1/1000 Scale Work
- Representation Techniques

NOVEMBER 18, 2021

- 1/1000 Scale Work
- Representation Techniques

NOVEMBER 22, 2021

FALL BREAK!

NOVEMBER 25, 2021

28 NOVEMBER JURY 2

DECEMBER 2, 2021

- Revision of 1/2000 Scale Masterplan and 1/1000 Scale Work

DECEMBER 6, 2021

- Revision of 1/2000 Scale Masterplan and 1/1000 Scale Work

DECEMBER 9, 2021

- 1/1000 SCale Work
- Representation Techniques

DECEMBER 13, 2021

- 1/500 Scale Work
- Hardscape and Softscape

DECEMBER 16, 2021

- 1/500 Scale Work
- Hardscape and Softscape

DECEMBER 20, 2021

- 1/500 Scale Work
- Hardscape and Softscape

DECEMBER 23, 2021

- 1/500 Scale Work
- Hardscape and Softscape

DECEMBER 27, 2021

- 1/200 Scale Work

DECEMBER 30, 2021

- 1/200 Scale Work

JANUARY 3, 2022

- 1/200 Scale Work

06 JANUARY JURY 3

JANUARY 10, 2022

- Deatail Drawing
- Representation Techniques

JANUARY 13, 2022

- Revision of All Works
- Project Report Submission

THURSDAYS

SUBMISSION 1

Sketches, schemes, diagrams, texts, 2 and 3 dimensional expressions describing general planning and design thoughts,scenarios and approaches on macro scale

SUBMISSION 2

Analysis of natural and cultural landscapes around Ayamama River, spatial reccomendations on flood, 1/2000 scale masterplan, 1/2000 scale work package and 1/1000 scale masterplan strategy and general approaches of the programs + revision of earlier works

SUBMISSION 3

1/500 and 1/200 scale work package, spatial design decisions, plantation and structutal design strategies(material, structure, planting design application details) + revision of earlier works

FINAL SUBMISSION

*date will be announced.

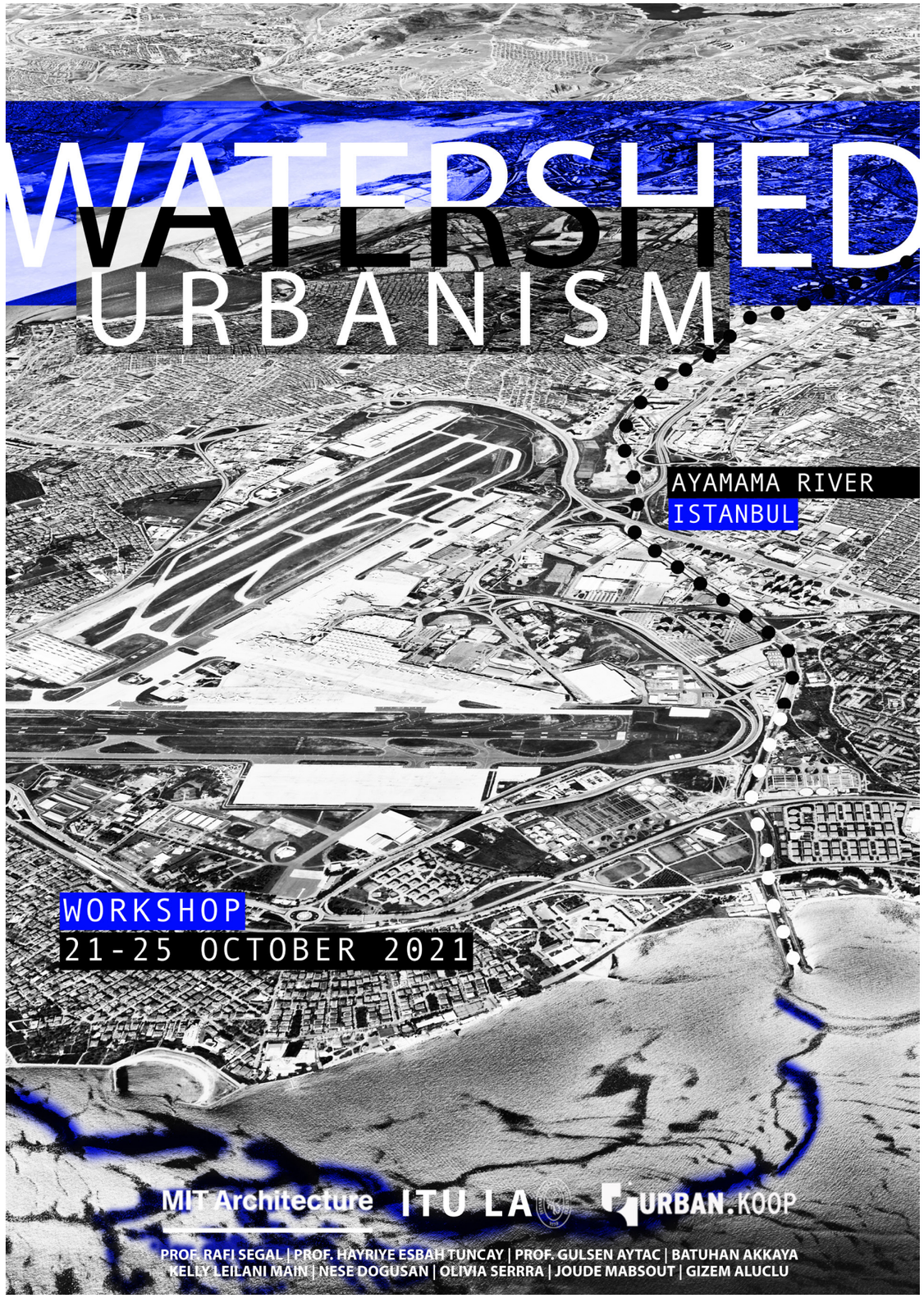
Macro scale analysis, scenarios, design and planning approches, 1/2000 scale masterplan and work package, 1/1000 scale masterplan and work package, 1/500 scale work package (including soft landscape, hard landscape and superposed plan), 1/200 scale work package, detail drawings, project report.

*Work packages include plans, sections, sketches, schemes, diagrams, texts, 2 and 3 dimensional expressions.

WATER & the city

Ayamama Corridor

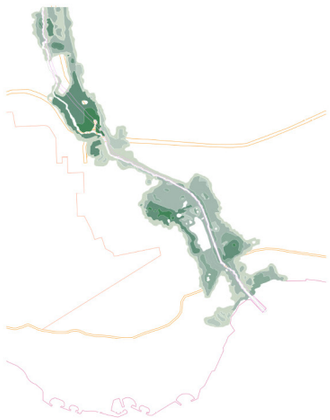
In the scope of the Landscape Design IV studio after a year and a half of isolation due to Covid 19, it was conducted a face-to-face workshop, “Watershed Urbanism”, on Oct 21-25, 2021. Our partners were Massachusetts Institute of Technology’s Urbanism and Architecture school @mitarchitecture @mitsap and UrbanKoop @urban.koop .



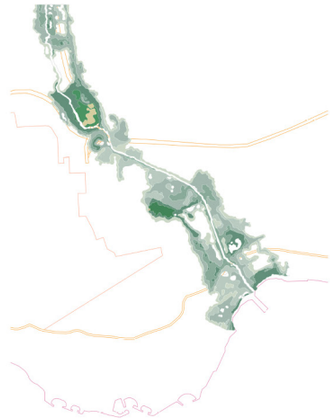
WATERSHED URBANISM

Workshop Outputs

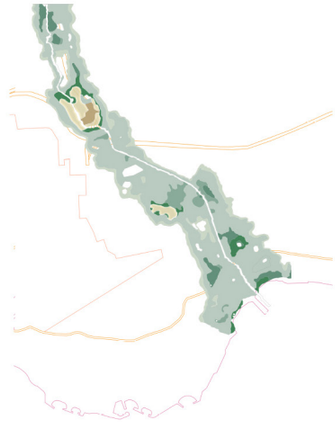
In the workshop held in cooperation with MIT Architecture and Urban Koop, the students were divided into groups and visited the Ayamama corridor. They visualized the routines of the users they observed during the field trip. They tried to relate these routines to the flood in Ayamama. They developed spatial collages and before-after plans that offered suggestions to the problems they identified through users.



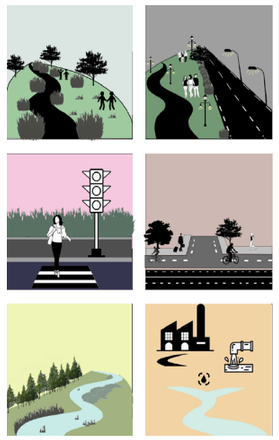
25 years flow interval



100 years flow interval



500 years flow interval



After the suggestions to the area, the surroundings and the river is it's safest position.
For the dangerous situation at the river surrounding's solution is to make the space more inclusive and friendly. Also the lighting matters because if the lighting is better, the space is safer.
Another problem was the accessing to the river surroundings. To fix this problem the pedestrian crossings and bicycle roads are designed.
To make the river clean, the factory's wastes will be transport to another facility and the water will be more clean and have a less smell.
So with the solutions, more people will connect to this space and feel safe.

Gokay is 20 years old. He lives in Bakirkoy and he is a student at Istanbul Kultur University. He didn't know the 2009 flood but he saw the Ayamama River. He told 3 things to us that are;

1. The Ayamama River area is sketchy and empty so all of the dangerous people comes here at night. The are is more dangerous at night time to walk through.

2. Access of the river and it's surroundings is difficult. Gokay told us he wants to go to school by bicycle and he couldn't because there are no bicycle roads or even pedestrian crossing. His school is close to his house but he couldn't ride his bike to the school.

3. He always had bad smells from the river and it's probably the factory's waste and people's garbages. The river always so dirty and full of garbage. Also the river's surrounding is very gray and dull, he said.

26-year-old Emir leaves his house to go to his shop in Ataköy. It uses the bus number 98 to reach Ataköy from Halkalı. However, he has trouble using the bus every morning due to the intensity. After getting on the bus, it gets off at the 'children site' stop. After getting off at the stop, it takes about 20 minutes to walk to reach the shop. However, as a pedestrian on this walking route, he experiences many difficulties. For example, Emir finds it difficult to walk because the pavement is insufficient in the early parts of his route and too many vehicles pass by. Afterwards, he has difficulty again because there is no pedestrian crossing in the places he crosses. After passing this place, there is no space for pedestrians to walk again, as vehicles are parked on the sidewalk where the sites are located. In this area where there is not much walking opportunity for pedestrians, Emir goes to work every day with difficulty.

After our suggestion, Emir's story changes as follows: After getting off the bus, he walks comfortably and safely on the wider pavements we designed. Then, when he reaches the intersection of the roads, he can safely cross the opposite road through the pedestrian crossing we made. His next difficulty was that he couldn't use the sidewalks because the cars were parked. There, we suggested that the vehicles be parked in the car parks within the site, not on the pavement. As a pedestrian, Emir can now use the sidewalks safely and comfortably, as we have prohibited parking on the sidewalks. In line with our suggestions, we have eliminated the difficulties experienced by many citizens such as Emir and Emir on foot.

1.A Social Place
In the new area we created, Göktan can socialize with a large audience
in the family park close to where he lives.
He takes long walks with his family and friends on the walking route by the water,
away from the noise and crowd of the city.

2.Perfect For A Nature Lover & Artistic Soul
He is a nature lover, enjoying nature in this park with a lot of plant diversity.
He enjoys his spare time with fragrant plants and plantis absorb carbon dioxide emissions, and he carries
out his hobbies such as writing, reading and drawing outdoors.

3. A Safer Place
With its design that appeals to families, which is a well-lit
park at night, he and his family feel safer in this park.

Gökhan,65 years old
He is a retired judge, now a painter and musician.
He can play guiar and piano.He also wrote a novel.
He have two daughters and he is worried about their future.
He heard about the 2009 flood and remembers cars floating on the water.

1.Social
He is a very social man. He has a lot of friends of his age because he is living in
Bakırköy for a long time. Every day he goes for a walk alone or with friends.
But but there is no walking path.
They are walking in the noise and crowd of the city

2.Nature Lover
He loves and longs for trees and greenery and expresses his longing and complaints
about the current situation by saying.
"There is no life without trees, people are the cruelest enemies of nature".

3.Artistic Soul
He is interested in music and painting since highschool. But he went to
law school and after retiring he started playing instruments and painting again. He even wrote a novel. He wants to have a green area
where he can read or paint outside in his spare time.

4.Wants To Live in A Safer Place
He says where he lives is not a safe place. Some time ago he was robbed
and his phone was stolen by young people living there.
He wants to live in a safer place.

WATER & the city

Studio Outputs

NEW FORM OF LIFE
Zeynep Berfu Yılmaz

Ayamama Stream, which is the subject and location of the project, is a stream located on the European Side of Istanbul. It arises from a spring in the eastern parts of Başakşehir district. It flows from Bağcılar and Bahçelievler districts and pours its waters into the Marmara Sea within the borders of Bakırköy district. According to historical sources, Ayamama Stream was surrounded by fertile agricultural lands until recently. It had many branches from the source of its birth until it spilled into the sea. It was an important source of water for the surrounding orchards, gardens and farms.

There were many historical bridges and historical holy springs from the Byzantine period on it. Due to the intense migration to Istanbul after the 1950s, illegal construction began around the stream. Due to wrong urban planning, many factories and industrial facilities were established around the stream. Due to these establishments, the waters of the stream faced the problem of excessive pollution. Changes were made in the stream bed as the surrounding villages and illegal structures evolved into today's districts and the D100 and TEM, two of the most important roads of Istanbul, pass through the region. Most of the stream was taken underground and its bed was narrowed.

The aim of the project is to bring the creek in its natural bed to a condition that will not pose a danger to the people living around it and at the same time offer a living space and a new life form to people and nature.

"A new life form in Ayamama" is based on three main principles. The first is "Everything Starts with Soil" the second is "Safety is Important" and the third is "New Places & New Routines.

1. Everything Starts with Soil

As a first step, priority was given to the soil, allowing the Ayamama Stream to flow on a permeable surface instead of the concrete channel through which it was flowing. The bed of the stream was also widened from place to place and the flow rate was provided. The vegetation on the islets formed on the stream was the most important factor that both cleans the water and ensures the continuity of the ecosystem around it.

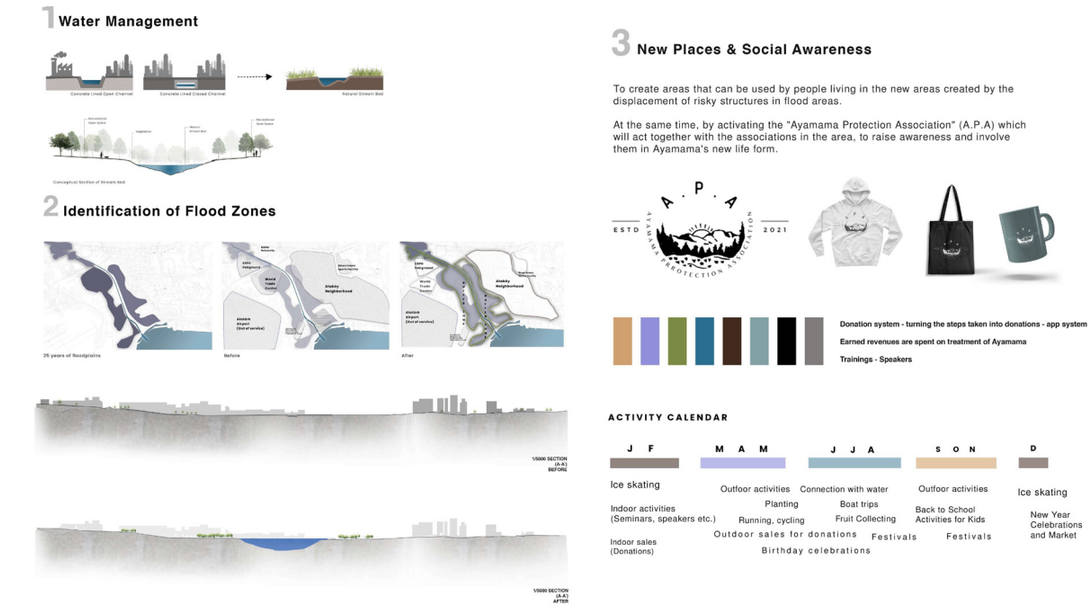
2. Safety is Important

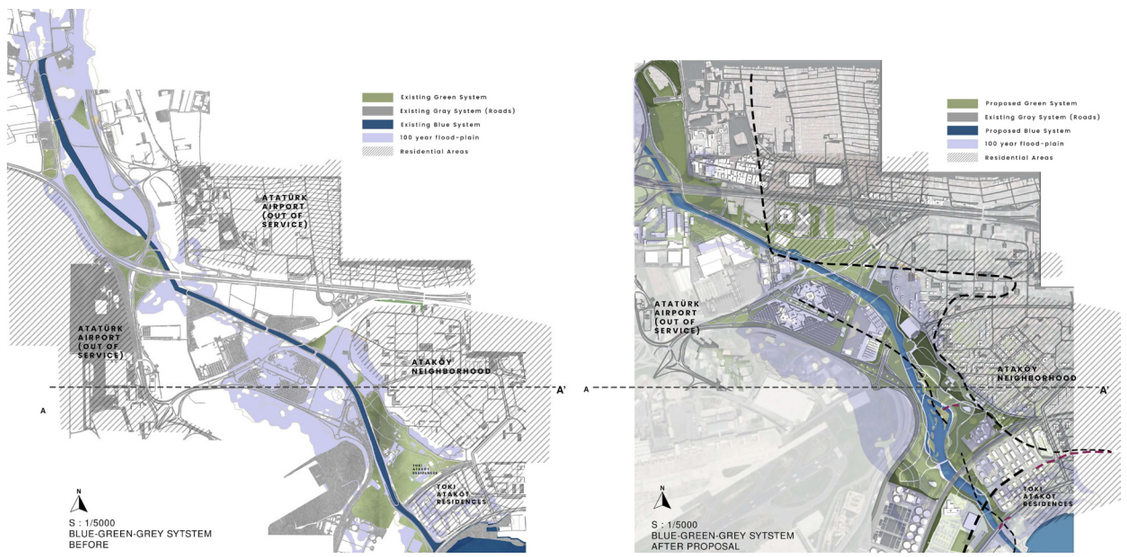
By looking at the 100-year-old flood map of the creek, which was flooded due to heavy rainfall before, the endangered and residential areas were emptied and designed in a way that would not harm anyone in case of flood. these areas are generally sloping and vegetated areas, but they can also continue to be used during floods.

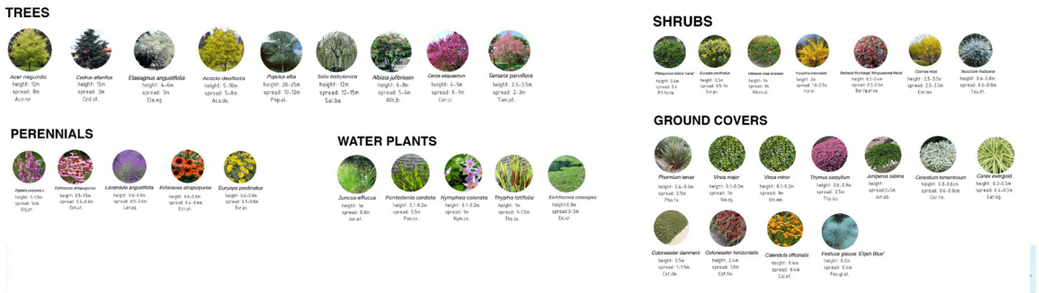
3. New Places & New Routines

Due to the pollution, bad use and bad smell of the Ayamama creek, there was no area for the people living around it to use. After the creek was cleaned and started to flow in its natural bed, walking, jogging, sports fields, bridges, and functional open areas were created in the new areas created that can be used comfortably in daily life.

To create areas that can be used by people living in the new areas created by the displacement of risky structures in flood areas. At the same time, by activating the "Ayamama Protection Association" (A.P.A) which will act together with the associations in the area, to raise awareness and involve them in Ayamama's new life form. In A.P.A there is a donation system like turning the steps taken into donations an app system. The revenues from the products with the A.P.A logo sold and the activities held are spent on the improvement and maintenance of the waste treatment plant and Ayamama Stream. At the same time, seasonal activities are held in the association. (such as ice skating in winter, boat trips in summer, fruit picking, festivals, walks)








WATER PLANTS, A.P.A ACTIVITY AREA AND PEDESTRIAN CONNECTIONS (AREA 2 IN 1:1000 PLAN)

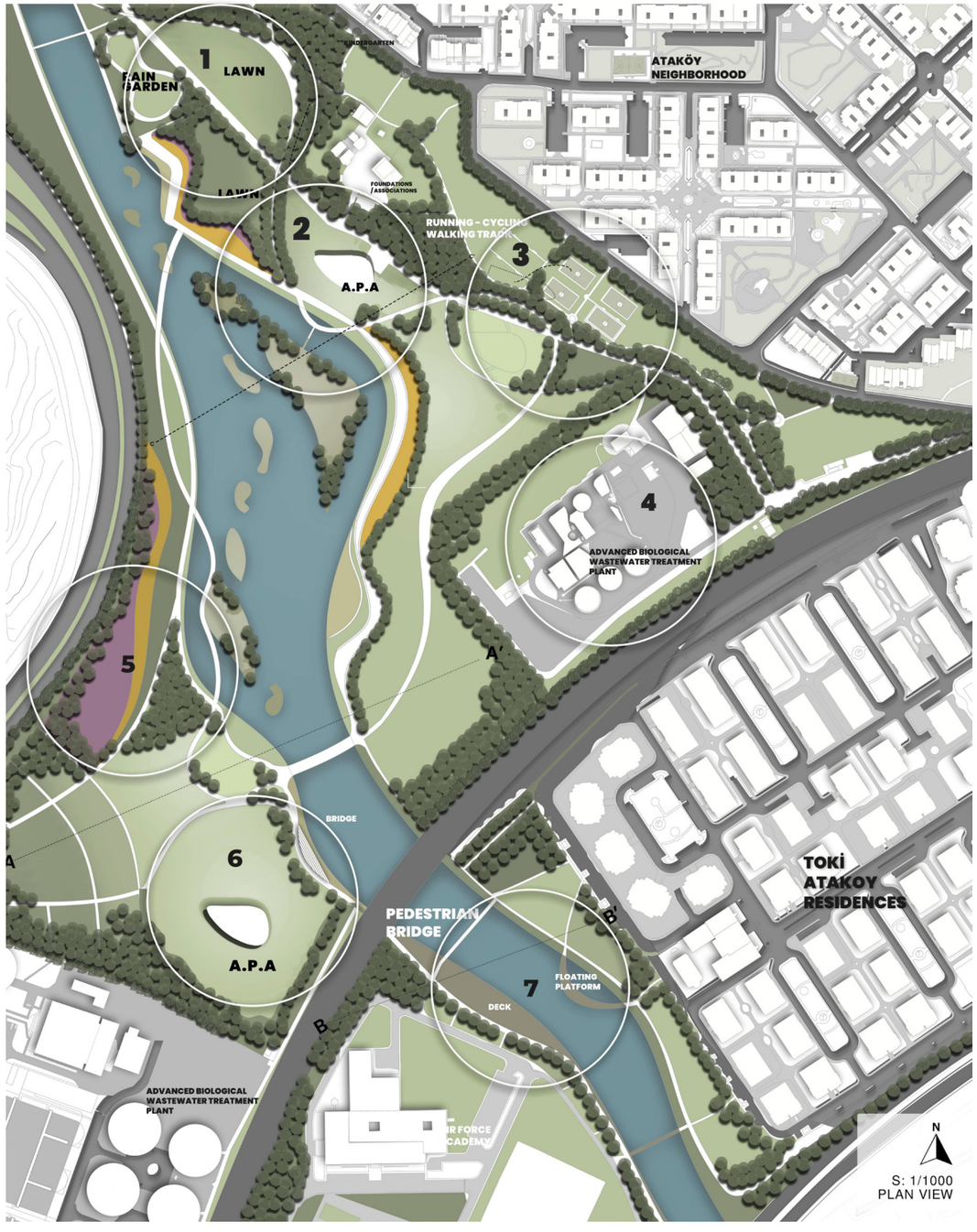

WOODEN DECK AND FLOATING PLATFORM (AREA 7)

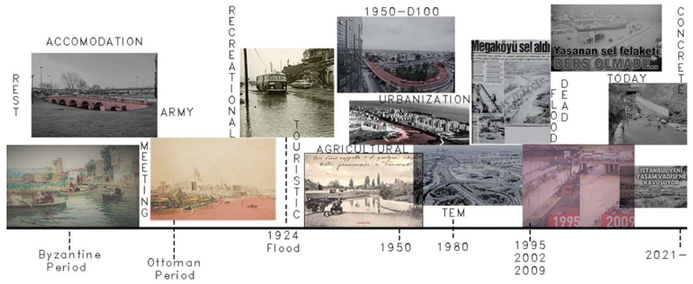
There are 6 basic areas in the new living area created in Ayamama creek.

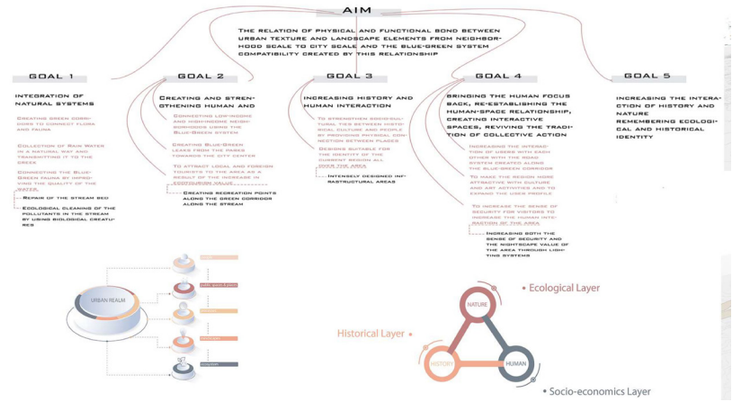
1st area: Raingarden, sandy area and open area, 2nd area: A.P.A building, bridge for crossing to opposite island, 3rd area: A sports field serving the Ataköy neighborhood, walking and jogging paths, 4th area: Advanced biological wastewater treatment center, 5th area: Buffer zone and garden on the side of the road with a high slope, as well as a walking path with a passage to the opposite island, 6th area: A.P.A.'s second building and functional space, 7th area: The multi-purpose wooden deck and the floating platform on the opposite shore.

Permeable materials were used in the construction of the park. Permeable concrete and andesite stone flooring were used on the pedestrian roads. As lighting elements, both large and high lightings and small lightings that provide illumination from the ground were used for security purposes. While seating elements are provided for people in places, areas where people can be free were created in places. In planting the area, mostly Acer negundo, Acacia dealbata and Tamarix parviflora were used to create a grove atmosphere in the urban forest inside the site. In shrubs, Pittosporum tobira "nana" and Cornus mas were the most preferred shrubs.

Colorful and striking roads were created by using Digitalis purpurea, Echinacea atropurpurea, Lavandula angustifolia, Euryops pectinatus, which are perennial plants that also provide a nice scent on colored roads. By using aquatic plants Juncus effucus, Pontednia cordata, Thypha latifolia, Eichhornia crassipes and Nyphea colorata, a water source was created both for water purification, aesthetics and feeding the surrounding ecosystem. As a result, Ayamama Stream and its surroundings have been turned into an area where people can come again for touristic purposes, as in the past, by cleaning the stream water, ensuring the sustainability of the surrounding areas and planting.







RE-VIEWING AYAMAMA
Beyzanur Seferi

The aim of this project is to establish an ecological balance by creating a green corridor around the Ayamama Stream, to bring the creek together with people and to integrate it with nature, and to minimize the risk of flooding. Being in the center of Istanbul, passing through six different districts, many workplaces , residences, industrial facilities etc. It is in an important position as it has a harbor, pours into the Marmara Sea and intersects with important connection roads.

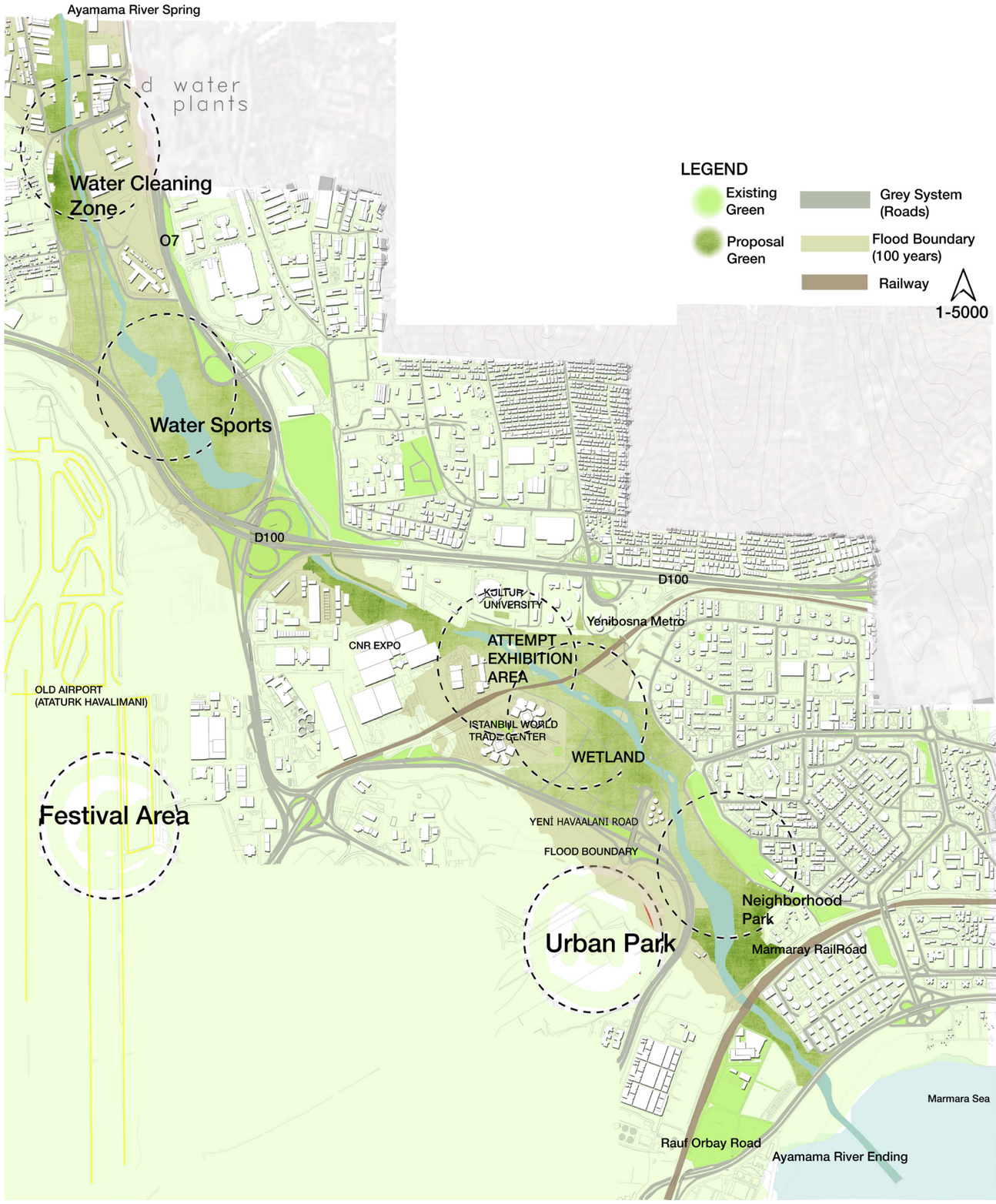
It is a fertile region known for its summer resort area and its surrounding orchards. In the Byzantine period, the passengers stayed before moving to the city, in the Ottoman period, the army met the sultans before they went on a campaign, there were bostans in the 1900s, but today the bed of the Ayamama stream is in a situation where the sewage and industrial waste waters are left and the stream bed is covered, and the water quality is very low.

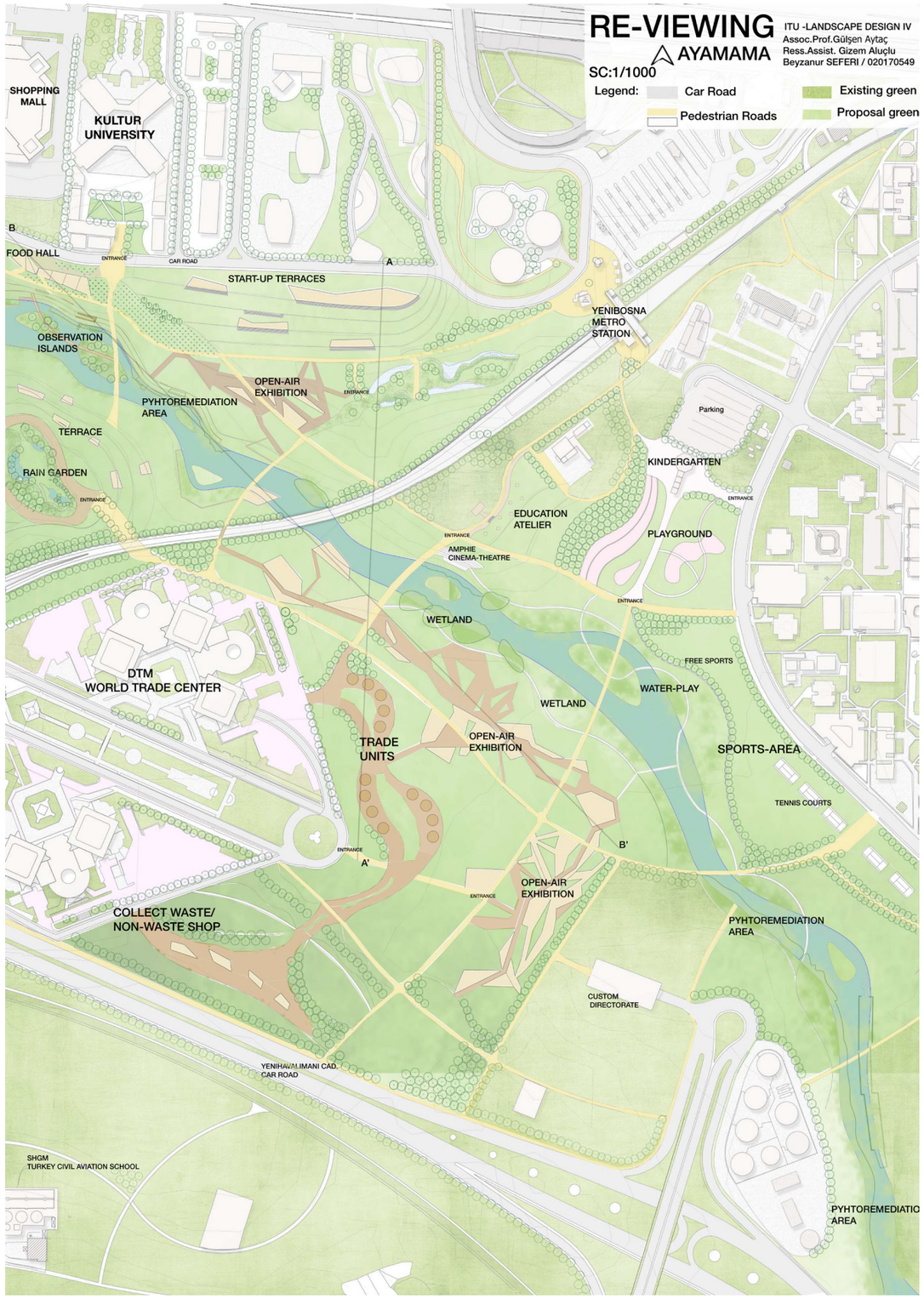
The physical conditions of the creek and the fact that about 50 domestic and industrial facilities in its basin directly dump their wastes directly into the Marmara Sea led to the aim of primarily improving the creek, discovering and developing the discharge methods of wastewater in the creek, and then bringing the basin and creek back to life. It was aimed to make the urban fabric and the river corridor a system working together and to create a public space.

In this direction, it was aimed to restore the ecological qualities of the creek corridor and turn the creek corridor into a blue system that works within the urban system, and then to form a whole by supporting it with the green corridor. The concrete base of the stream was removed and turned into a natural earth ground. The creek bed was widened and islets to act as sponges were added.

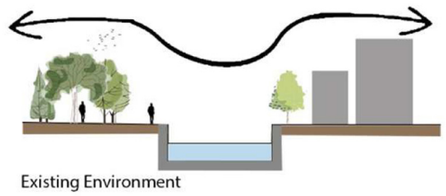
It was aimed to clean the water and reduce the risk of flooding by creating wetland areas and bioswale areas at lower elevations. In the decisions made at the upper scale, it was aimed to integrate the green systems and programs integrated into the existing system as a whole.

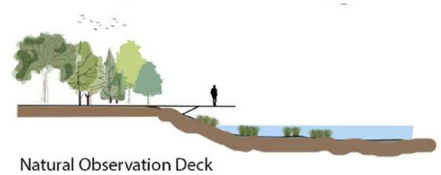
ATTEMT EXHIBITION AREA

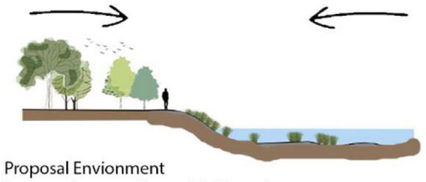


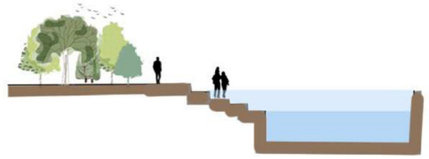


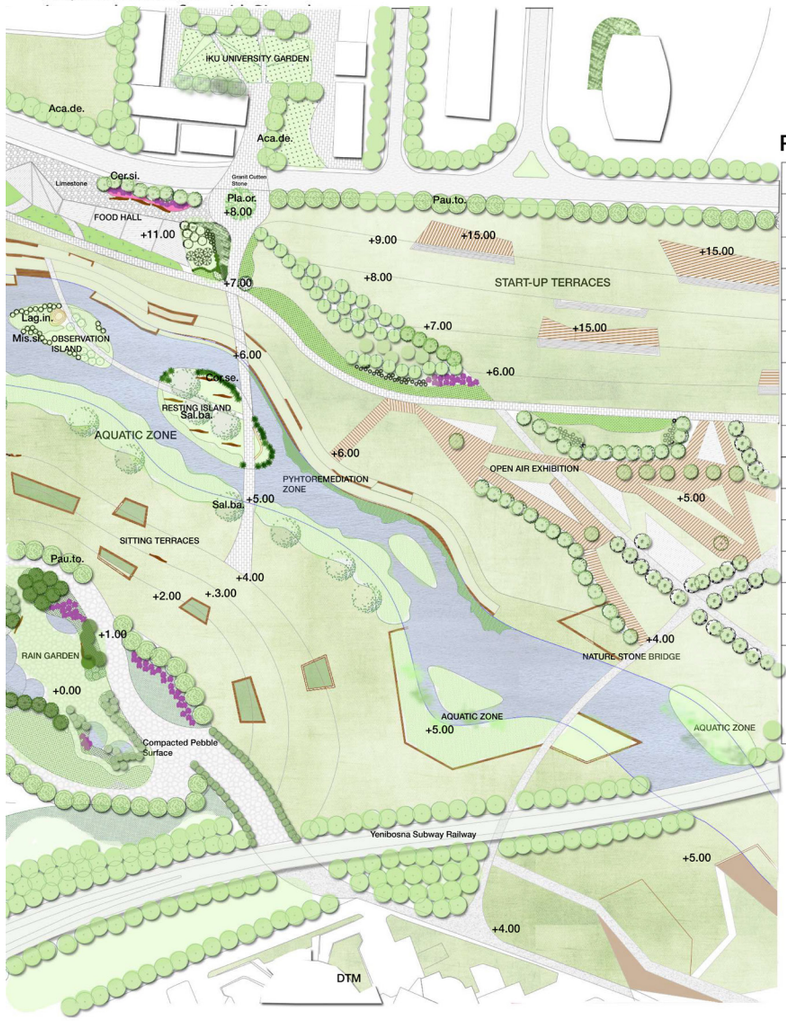
In the 5000 plan, by referring to the history of Ayamama, functions such as urban agriculture, water sports, festival area, transformation of the old airport into a forest area, urban park were assigned. On the small scale, at the intersection of DTM, Kültür University, and CNR Expo, connectional functions were targeted. Start-Up and Food Hall areas, which can be used by covered students for seasonal use at the edge of the university, an Open-Air Exhibition area throughout the plan, and a Trade Units area for the promotion and marketing of initiatives that will occur in the Start-Up units, besides the DTM. A Non-west unit area was created to collect, evaluate and sell the waste generated in these areas. In order to minimize the risk of flooding, the water flow directions were determined and Rain-Garden was proposed for the areas at the lower level. By leaving a sports area, workshop and children's playground close to the residential areas and the stream, interaction with the stream and area use integrity were ensured. By using various deciduous and evergreen trees, seasonal variation contributed to the creek landscape, and stream water was made cleaner with water-purifying plants.









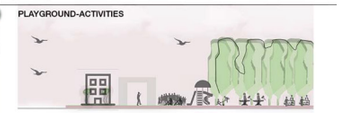


PLANT LEGEND

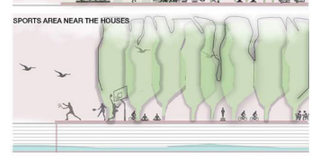
NO	symbol	code	Latin name	Height	Width	Unit
1		Cer.si.	Cersis siliquastrum	5m	6-7m	20
2		Lag.in.	Lagostromia Indica	4m	3m	50
3		Pau.to.	Paulownia tomentosa	10m	7m	14
4		Ela.ag.	Elaegnus Angustifolia	3m	3m	44
5		Pru.se.	Prunus serasifera	6-7m	4m	14
6		Hib.ro.	Hibiscus rosa sinensis	0.5m	0.4m	40
7		For.in.	Forsythia intermedia	0.9m	0.9m	52
8		Hyd.ma.	Hydrangea macrophylla	1.2m	0.9m	30
9		Aca.de.	Acacia dealbata	8m	6m	90
10		Sal.ba.	Salix babylonica	10m	10m	9
11		Syr.vu.	Syringa vulgaris	1.5m	2.1m	44
12		Alb.ju.	Albizzia Julibrissin	6m	8m	35
13		Mis.si.	Miscanthus sinensis	2.5m	2.5m	30
14		Mag.gr.	Magnolia grandiflora	7m	10m	32

Groundcovers:
Bioswale :
Lemna minor, Eichornia crassipes, Pistia stratiotes
Salvinia natens, Tyhpa sp., Phragmites sp.
Healing Water : Alyssum sp. , Carex sp., Iris sp., Juncus acutus Typha sp.

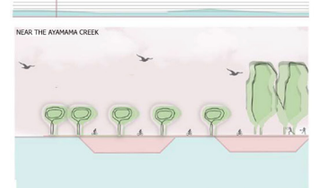
PLAYGROUND-ACTIVITIES



SPORTS AREA NEAR THE HOUSES



NEAR THE AYAMAMA CREEK



PROGRAM DIAGRAMS