2020 ISOCARP Student Award
Special Mention

THE CANAL CANDIANO, 2100, Ravenna, Italy

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According to the IPCC report, sea level will rise +1 meter which will affect the whole region socially, economically and environmentally. The new coastline will occur, and many lands and industries will be under the sea level.

The canal has 11 km long and it ends at the Marina di Ravenna.

Ravenna, is located in the Emilia-Romagna region of northern Italy. It was the capital city of Western Roman Empire. The city had an importance about fossil fuel energy, especially in 70s. There were many factories and offshore platforms in Adriatic Sea.
The city center of Ravenna is surrounded by two river. Uniti River has the natural water course characteristic. The other one is the Canal Magni. Inside the city there are many water channels.

The main function of the Canal Candiano is the industry. There is a headquarter of the port administration. Some of gardens are related with historical areas.

As an infrastructure, the railway passing through the city center and continues to the industrial areas which will cannot be using.

In the city center, green areas consist of sport areas and other urban facilities. Many streets have isolated trees. The city center is surrounded by agricultural fields.
PROBLEMS & POTENTIALS

Main problems of the site are that the interruption between the historical city center and the canal and the flood risk of rivers. There are many abandoned industrial buildings along the canal and landscape is neglected too.

Potentials of the site are continuous tourism potential, archeological sites, and heritages. There are also some new functions and facilities around the canal such as pop-up and wall art spaces.
THE CONCEPT

The city structure shows us the importance of water not only as resource but also as trade, industry and recreation. The water gives the identity to the city of Ravenna.

Aims of this project are
- to enhance the connection between people and the city
- to emphasize the old pattern of the canal
- to improve the water management system
- to collect & connect the human memory in the design process.

1st Century
3rd Century
6th Century
THE STRATEGY

1. CONNECTOR
The main aim of this strategy is to create a constant link in between other strategies. It focuses on enhancing the quality of public spaces and green areas with considering the needs of social activities.

2. RIVER CORRIDORS
Uniti River and Magni Canal are very connected with the city center. The aim of this strategy is to decrease the flood risk, and to improve the water management system.

3. NEW COASTLINE
Due to the sea level rise, the coastline will change by time. The aim of this strategy is to create a larger buffer zone with wetland areas which is not isolated from the people but at the same time has limited accessibility.

4. THE CANAL CANDIANO
The main aim is to adapt the built and natural environment for the future with considering to keep the strong characteristic of the Canal Candiano and to create a new space for the socio-economic environment.
REHABILITATION OF THE RIVERSIDE
Due to the flood risk, the both sides of the two rivers are enlarged with the natural vegetation. These areas are collecting and filtering the water. In the surrounding of the Canal of Magni, the natural vegetation is added to increase the permeability of the surface.

WETLAND
Wetland vegetations are crucial. When the sea level rise is happen, new coastline will occur as wetland areas which will be connected with the river corridor.

RECREATIONAL AREAS
The Uniti River is connected with the city. Inside the river corridor, recreational areas will improve this connection.
NEW COASTLINE

EXPANDING BUFFER ZONE IN NEXT TO THE NEW LAGOON EDGE

USING WETLAND AREAS AS SPONGE CONCEPT

DESIGNING WETLANDS WITH ACTIVITIES & RECREATIONAL AREAS AND CONNECTING WITH CITY CENTER AS A MEMORY

Post-Oil City

PLANNING FOR URBAN GREEN DEALS
November 2020 – February 2021
TRANSFORMATION OF THE ABANDONED SITES

SPORT CENTER & MUSEUM

CULTURAL CENTER
REDESIGN OF THE EDGES

UNITI RIVER EDGES
Existing Edges
- Typical: Natural Edges and Housing with Flood Risk
- Proposal Edges:
  - Typology 1: New Area for Flood Risk and Replacement for the Old Bridge
  - Typology 2: Restricted Human Usage: Natural Materials for Pedestrian Ways
  - Typology 3: Restricted Human Usage: Natural Observation Decks

Proposal Edges
- Typical: Vertical Wall
- Proposal Edges:
  - Typology 2: Wooden Deck
  - Typology 3: Different level for water and side walking
  - Typology 4: Natural Edge with Side Walking
  - Typology 5: Wetland and Pond System
  - Typology 6: Vertical Wall with Observation Deck

CANALE MAGNI EDGES
Existing Edges
- Typical: Sloped Wall
- Proposal Edges:
  - Typology 2: Vertical Wall
  - Typology 3: Different level for water and side walking
  - Typical: Vertical Wall with Observation Deck

Proposal Edges
- Typical: Vertical Wall
- Proposal Edges:
  - Typology 2: Wooden Deck
  - Typology 3: Different level for water and side walking
  - Typical: Vertical Wall with Observation Deck

CANAL CANDIANO
Existing Edges
- Typical: Sloped Wall
- Proposal Edges:
  - Typology 2: Vertical Wall
  - Typical: Vertical Wall with Observation Deck

Proposal Edges
- Typical: Vertical Wall
- Proposal Edges:
  - Typology 2: Wooden Deck
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Natural Environment
Built Environment
Social Interaction
FUTURE DEVELOPMENT

GENERAL PURIFICATION SYSTEM
Purification and Collection of the Industrial Water

Canal Candiano Water Purification System

Raingardens and Wetlands

FROM IMPERMEABLE TO PERMEABLE SURFACES

- Industrial Areas: 94,245 m²
- Concrete Surfaces: 50,398 m²

Impermeable surfaces: 409,400 m² which will be permeable.

Dry Season Extreme Conditions