

Dynamic Resilience / a symbiotic relationship between Nature and City

Competition report

MetroPOLIS, dsb landscape and 3TI LAB

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Spatial program

In terms of urban morphology the city of Berat presents itself as an aggregation of smaller nuclei which are a result of the progressive addition of neighborhoods and the different expansion patterns influenced by the succession of conquerors over history. Despite this complex history, the city presents a balanced coexistence between different ethnicities and religious groups.

The primary urban roads run along the two opposite banks of the river, but they also delimit the latter and, therefore, become an additional obstacle to the connection between the two sides of the city and the neighborhoods of Mangalem and Gorica. These roads seem like two independent arteries that only meet in two points – one is a pedestrian bridge and the other is also accessible to vehicles – this causes the river to appear as an independent element excluded from the life of the city. On the other hand, the secondary roads, rigid and linear with a roman layout, appear as ramifications that are projected beyond the city and into the farmland, the surrounding nature and the sinuous hills.

Vision / Strategic objectives

The main goal of the project is to promote local development conditions

through light and low-impact landscape and programmatic operations on the riverbanks and the islands, while preserving the specificity of the territory and guaranteeing the city's resilience to flooding in the years to come. All of the above can be achieved through the application of ecologically-sustainable development models.

In synthesis, the main objectives set by the project are the following:

- Strengthening the connections connecting the Osum Island to the city network, improving the connections between the riverbanks and the main areas of the city.

- Enriching the value of natural, cultural and environmental assets along the river with the aim of boosting and regenerating tourism throughout the year, offering both citizens and tourists new spaces for outdoor leisure and recreational activities.

- Protecting and improving the environment and preventing ecological degradation through preventive actions, management and reorganization of degraded and abandoned areas.

- Guaranteeing the resilience of the river and its islands.

- Favoring biodiversity and the presence of areas suitable for the growth of autochthonous plant and animal species.

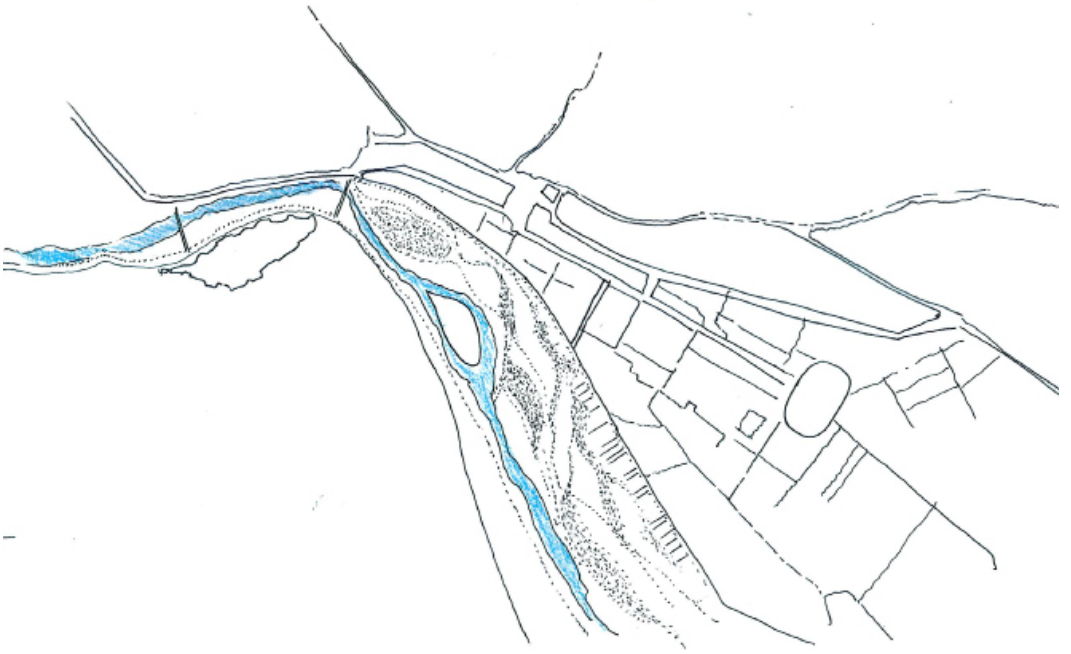


Fig1 / Spatial program sketches
source / competition report

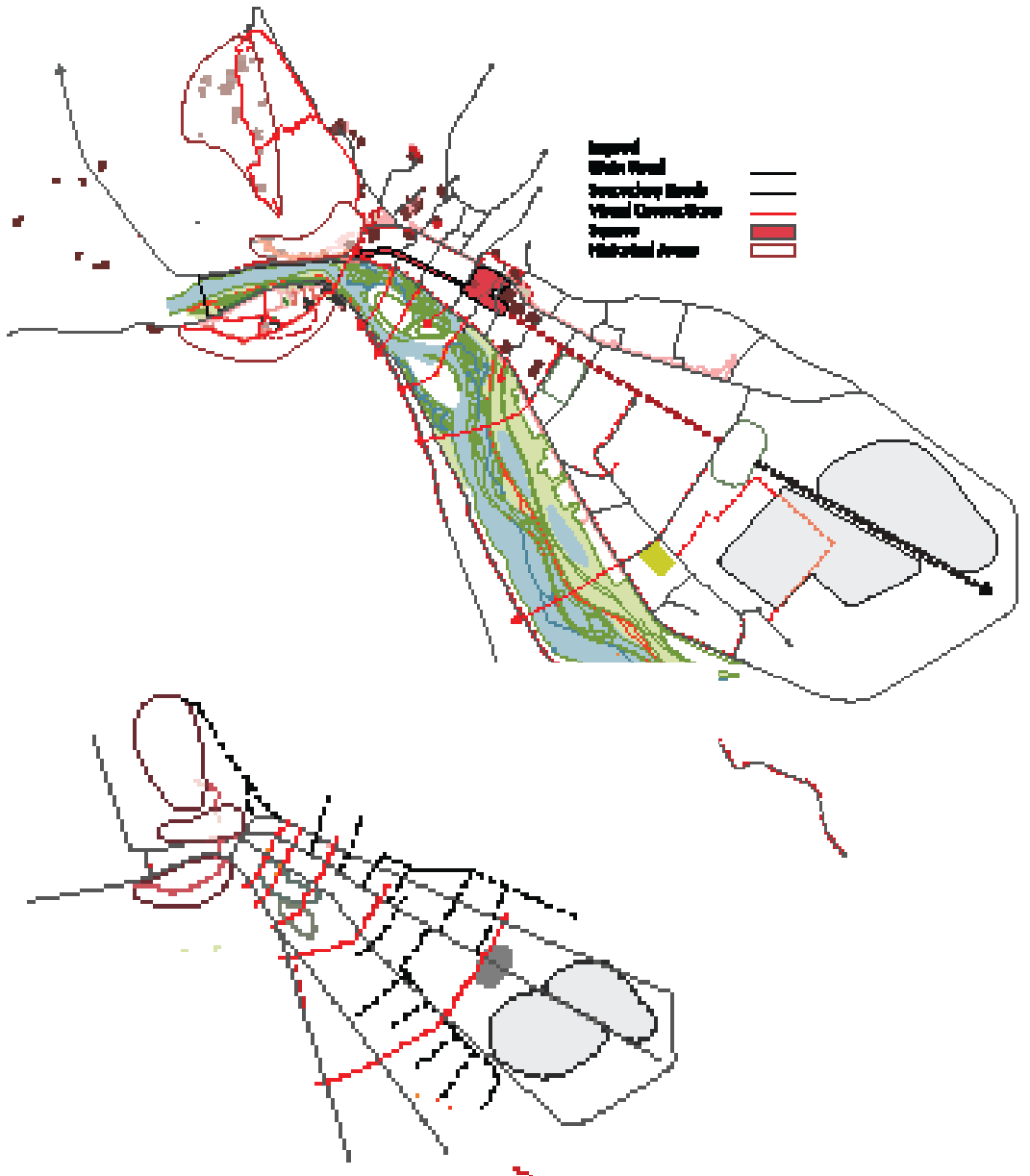
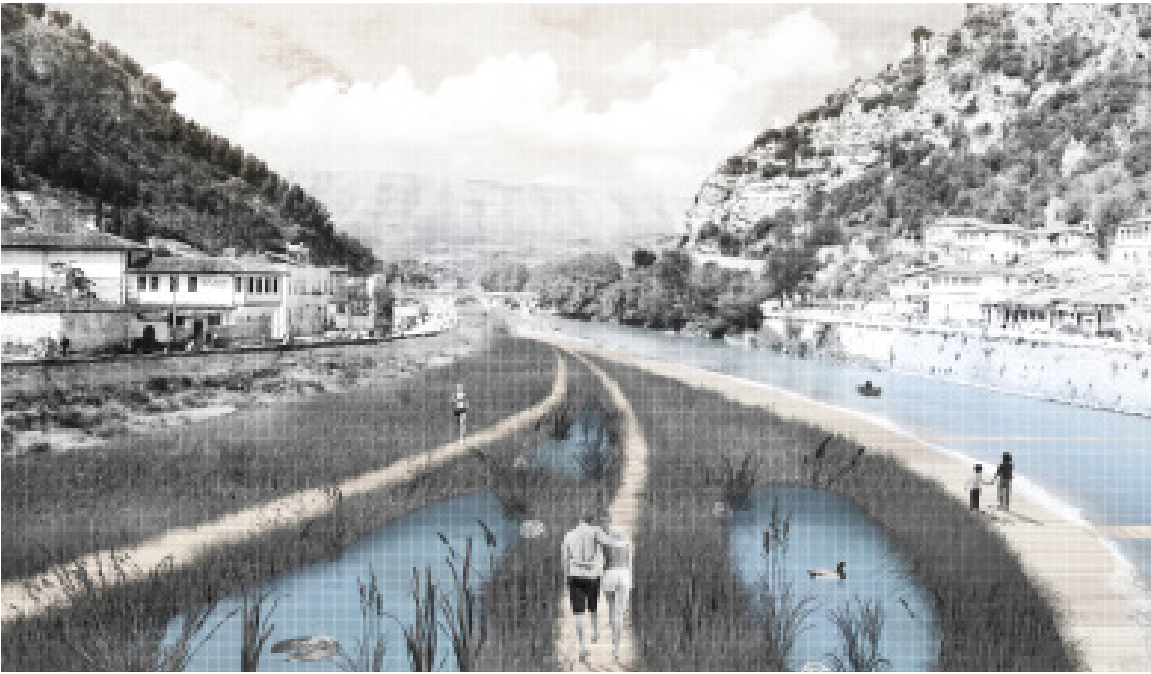


Fig2 / Strategy diagram
source / competition report



Vision / Strategies

- Securing the riverbanks with retaining rope gabion walls and riprap/rubble;
- Creating natural pools for water overflow storage;
- Protecting the main islands from erosion with reefballs;
- Improving physical and visual commotions through pedestrian paths, bridges and piers;
- Favoring the formation of small islands through placement of reefballs;
- Reintroducing and strengthening riparian vegetation and fauna (birds, insects, fish);
- Creating spaces for recreational and leisure activities along the paths and on the islands.

Landscape from above / the river as a system

"When I arrive in a city, I climb the highest steeple or tower to have a view of the whole before seeing the individual parts, and when I leave I do the same in order to fix my ideas." (Montesquieu, 1971)

In the western aesthetic culture of the 18th and 19th centuries, the *observation from an elevated point of view was mandatory if one wanted to evaluate the size or proportions of buildings and capture and combine the "presumed whole and the experienced detail"* (Mending, 2011) at once. But even today, when the image of the city does not match with its monuments any longer, the power of an unlimited overview is recasting the image of landscape from *green scenery beheld vertically to a flatbed infrastructure that includes both natural and urban environments* (Waldheim, 1999).

Any visit to Berat must include a climb

up the ancient Kala settlement where the viewer's gaze can embrace the river in its entirety. From this privileged and detached position, we can truly discover and understand the river as a system.

1001 windows framing the landscape

Berat is known as the city of a 1000 windows with the windows of the Gorica and Mangalem neighborhoods looking at each other across the river as if they were mirrors; windows offer the possibility of selecting a portion of the territory and framing the landscape. A similar situation exists with the island and the surrounding context and vice versa, created through sculptural objects in the landscape and on the island that frame the context and project the view across the river and beyond, along the paths on and up to the top of the hills: the city can now be seen from new points of view and the existing views can be privileged and strengthened.

Linking islands with physical and visual connections

The city's urban polycentric morphology generated by the urban evolution through history and reinforced by the influence of the Ottoman urban structure, appears as a set of nuclear agglomerations on both sides of the river: Kala, Mangalem, Gorica, the expansion in the direction of the old bazar and the Murad Celesi suburb to the NW on the foothill, are like islands linked by bridges across the river. In order to create an integrated system of relations the project proposes to highlight the existing paths towards relevant buildings with cultural, social, artistic, religious and

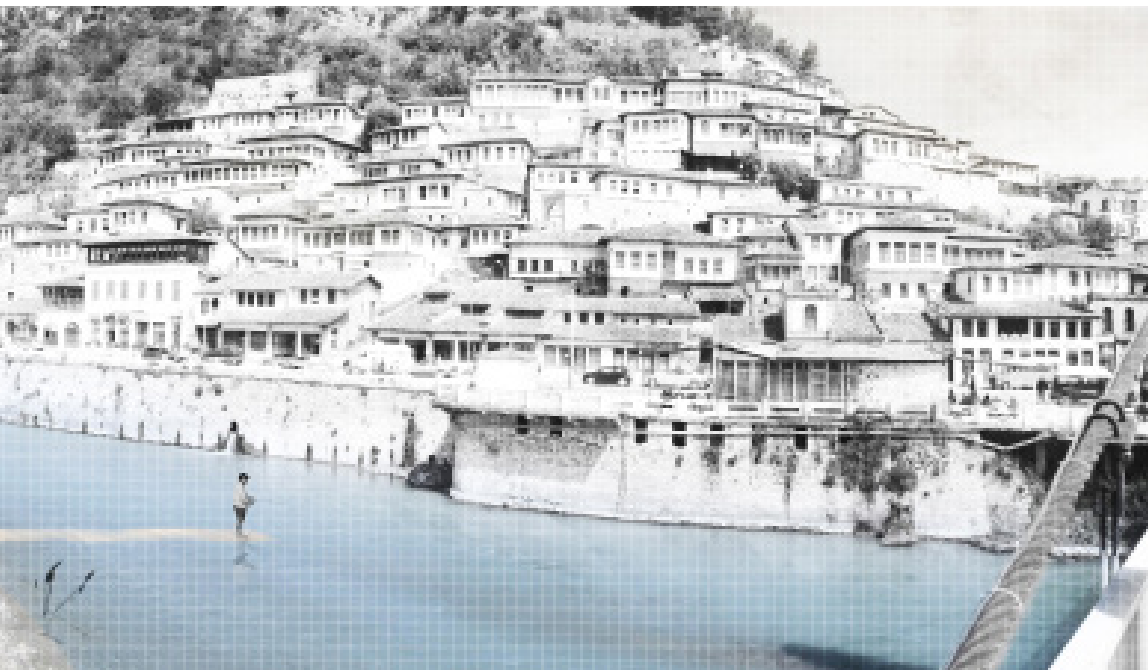


Fig3 / Project panoramic view of Mangalem area source / competition panels

historical symbols connecting them to the riverside and the islands through paths and touristic, cultural and environmental itineraries. This system will make the existing cultural values emerge and it will integrate them and the new leisure and recreational activities on the islands into a rich network of relations.

One of the project strategies foresees the inclusion of the island and the riverside paths in the pedestrian circulation system of the city. The paths along the river's waterfront will be regenerated and extended where needed to form a continuous promenade along the river; the latter will be crossed by pedestrian bridges that connect the north riverbank to the main islands. When the physical connections are impeded by the sea-level of the island and the partial or total sinking of the paths, the physical connection will be absent, but a visual connection will be established through panoramic cantilevered decks and land art sculptures that frame the landscape and project the view toward the surrounding territory.

The connecting linear elements which will be added across the river will be of three typologies, depending on the level of the islands and their proclivity to sink:

- Sinking paths / the ones that are located on lower levels and will be partially or totally submerged when the river's water level rises;
- Surface paths / paths that will remain on the surface and guarantee access and usage of the bridges even during medium water level conditions;
- Suspended paths / due to their resilience to flooding they will be the ones that can

house outdoor activities and eventually boating docks.

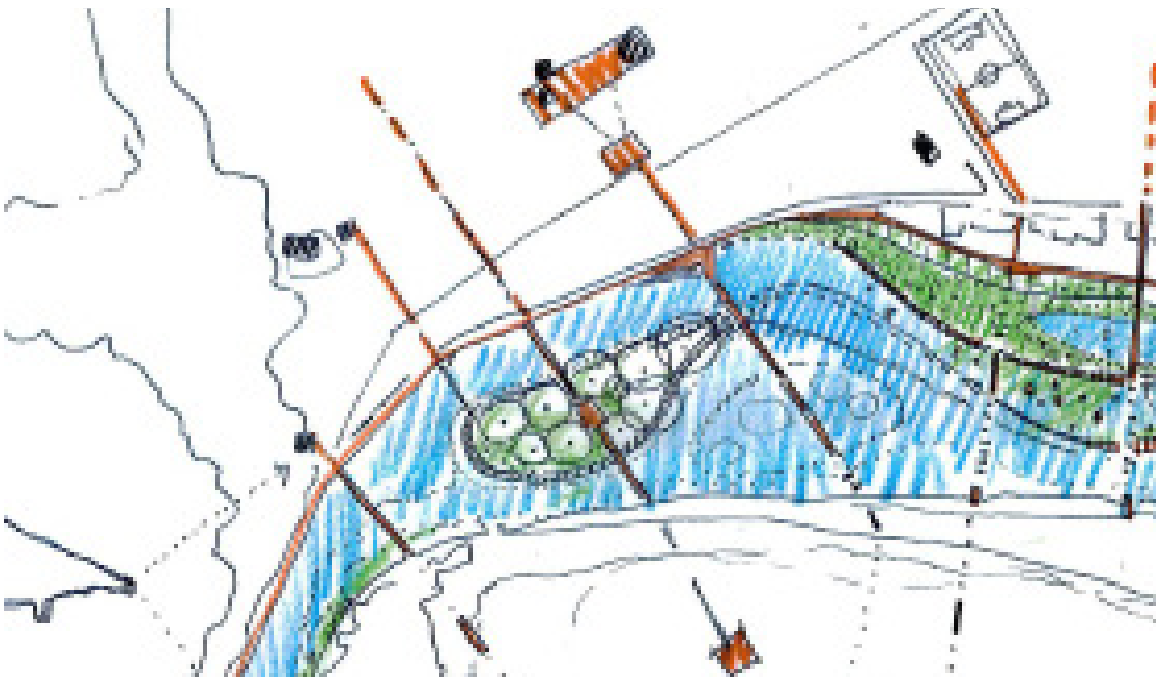
Dynamic edges

Limits have a thickness, they are not lines, they have biological thicknesses and the latter are richer than the environments they separate. When different areas meet richness is generated. (Gilles Clement, 2005 – Manifesto del Terzo Paesaggio)

The project seeks ways where the urban can cohabit with nature while showing resilience towards any natural phenomenon. One of the strategies applied is extending the concept of the buffer area to the entire river system and transforming the riverside of the limit between city and river into a thick biological system that establishes a dynamic relationship with the water, balancing the shifting levels of water and, at the same time, offering recreation space and, most of all, an opportunity for biodiversity consolidation and preservation.

Therefore, the strategy adopted for the edges of the river is the creation of an artificial wetland and water overflow storage pools; the latter act as bladders that during periods of high tide store the overflow water and protect the waterfront from flooding while during periods characterized by low water levels become outdoor pools and complement the urban beach areas.

Moreover, in the far East area of the north river bank, this new dynamic limit will offer the possibility of dealing with the informal settlement along the river; in fact, the above mentioned strategy will regenerate the area (through paths and vegetation)



and strengthen the resilience of the river banks (through retaining rope gabion walls with integrated pedestrian path, overflow storage pools and vegetation), guiding the future development of the area.

Berat Island

Berat Island is not a static element in the landscape; its shape and vegetation cover changes following the season and the level of the water; each mutation generates a different scenario.

Similarly the landscape project and the new functions respond to this shifting condition, pandering the constant evolution of the island and managing, not guiding, its mutation in terms of vegetation and shape; but also offering suitable outdoor activities and services based on the accessibilities of the area in different seasons.

Ultimately the project elevates and underlines conceptually the main islands and suggests the formation of new smaller islands in the future through the introduction of reefballs along specific locations of the riverbed.

A refugee for biodiversity / birds and vegetation

There is little doubt that Berat's biodiversity is declining, but for most taxa trends are difficult to quantify due to lack of data. However, birds are better studied than any other group of organism, and thus are well placed to provide us with information on the overall health of our environment. Birds are a good bio-indicators because they occupy a high trophic level, occur in a wide range of ecosystems, their taxonomy

and identification is well known, their territorial behavior (songs and displays) allow them to be censused readily during the breeding season, it is possible to collect large quantities of data in a highly efficient manner using skilled volunteers. In order to use the birds as an indicator first we have to restore their habitat, therefore the project proposes native vegetation such as grasses, shrubs and small trees to be planted on the river's edge.

Functional aspects

Berat has 32,606 Inhabitants (2011 census results) and one of the project's main strategies aims at introducing new leisure and recreation activities along the river and on the islands to attract a higher number of tourists, increasing and diversifying the attractions, which will also contribute to the economic growth and regeneration of the surrounding districts. The programmatic approach is centered on the establishment of a cultural waterfront development and eventually converting at a later stage one of the hotels along the riparian landscape into a visitor center. The river waterfront area and the island will be entirely walkable and cycle-friendly, guaranteeing a healthy and safe environment for all age groups.

A new way to live the riverside -tourist attractions, cultural and recreational activities for tourists and locals.

The design approach is to integrate engineering and art whilst being sympathetic to the local environment and preserving the landscape and the natural aspect of the islands. The plan is to merge the river and land by providing

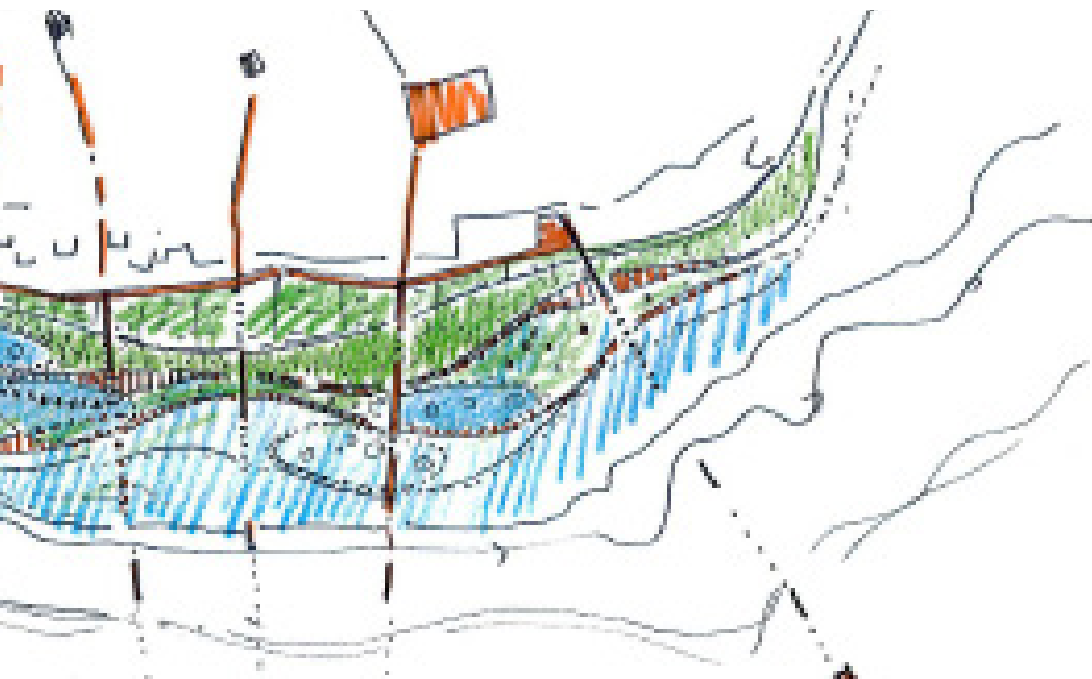


Fig4 / Linking islands, preparatory sketch
source / competition report

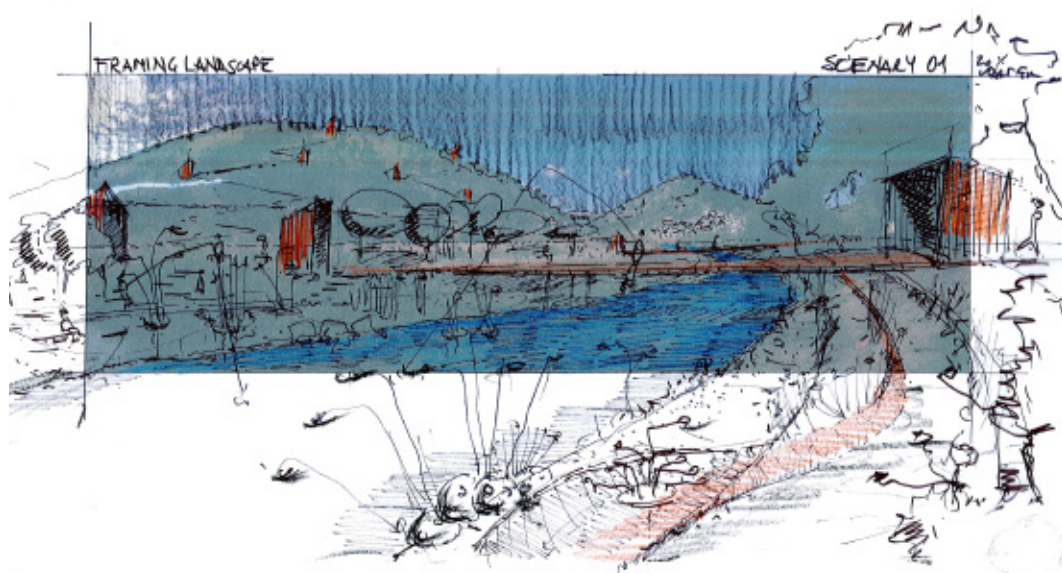


Fig5 / Framing the landscape, preparatory sketch
source / competition report

light support facilities (small boating decks, small kiosks, barbecue areas, linear playgrounds for children on the suspended paths) for activities such as boating, fishing and nature walking, picnics and light sport and leisure activities. The abovementioned should complement the already existing sports and leisure activities which characterize the SE area of the city Centre. Thanks to the diversification of the activities and their extension to all seasons the river and the island will no longer be just for walking and contemplating the landscape during spring, but also for swimming and sun bathing in the summer (urban beaches),

for bringing the children to the playground and for organizing outdoor educational activities all year.

Managing resilience / toolkit for the rise and fall of the river

The main strategy to address the issue of resilience to flooding is to refrain from trying to fix a predetermined shape and acknowledge that the very inconstancy/fickleness of biological systems can become the guarantee of resilience to time. The approach is to manage the perpetual mutation of nature, to orient its variation, not guide the latter and predetermine or limit the natural and dynamic movement

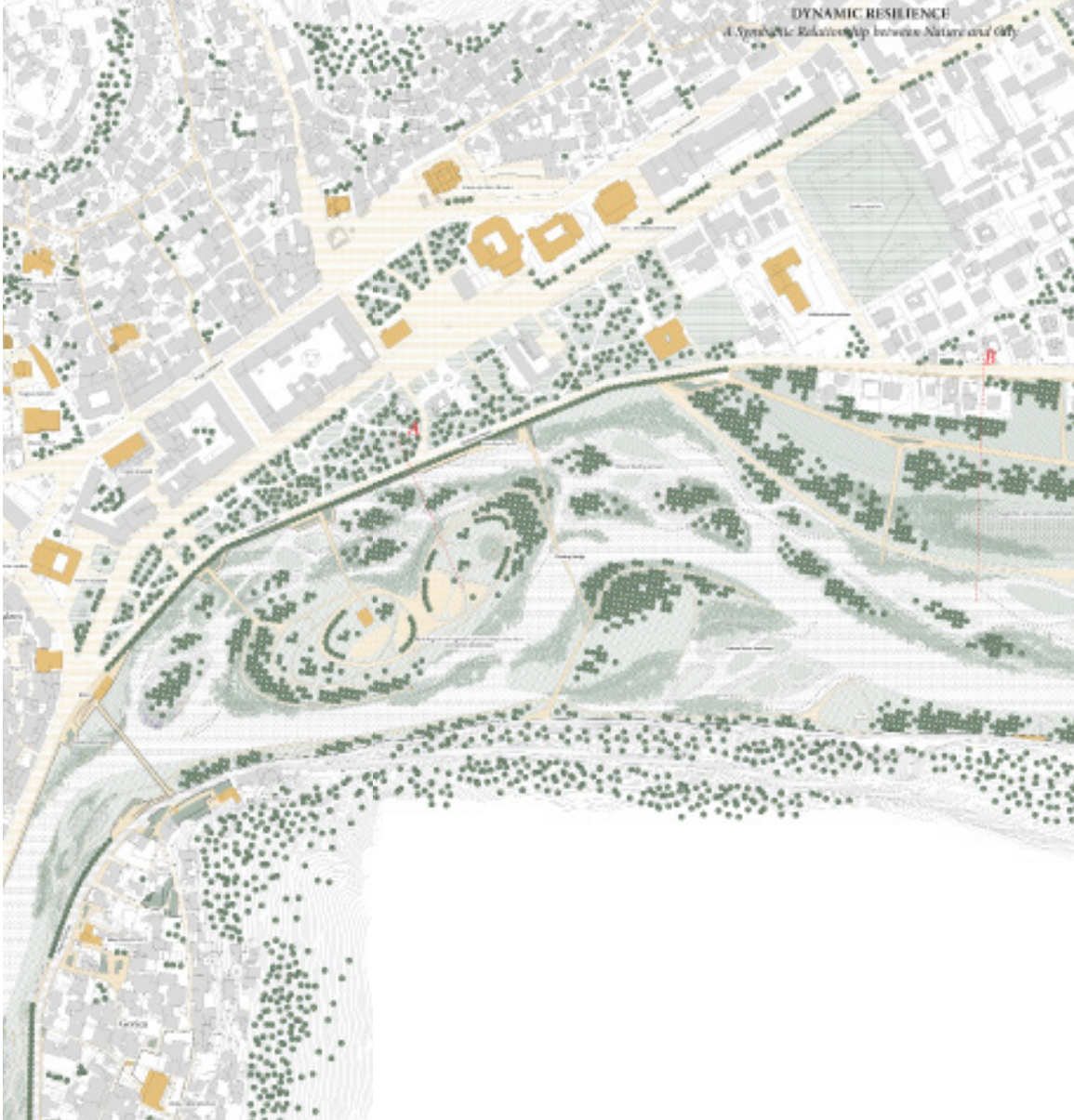




Fig6 / Masterplan
source / competition panels



and modification of nature.

This attitude was inspired by the concept of biological order and “Garden in motion” by Gilles Clement – in his first book: “The Garden in Motion” he talks about natural disorder (or biological order), which is still seen as something to be organized by architecture as it is not perceived as a general conception yet. By observing his own garden Gilles Clement formulates a new attitude towards gardening and landscape design, following the sequence: *Observe, Understand and Act using forces that are already present on the territory.*

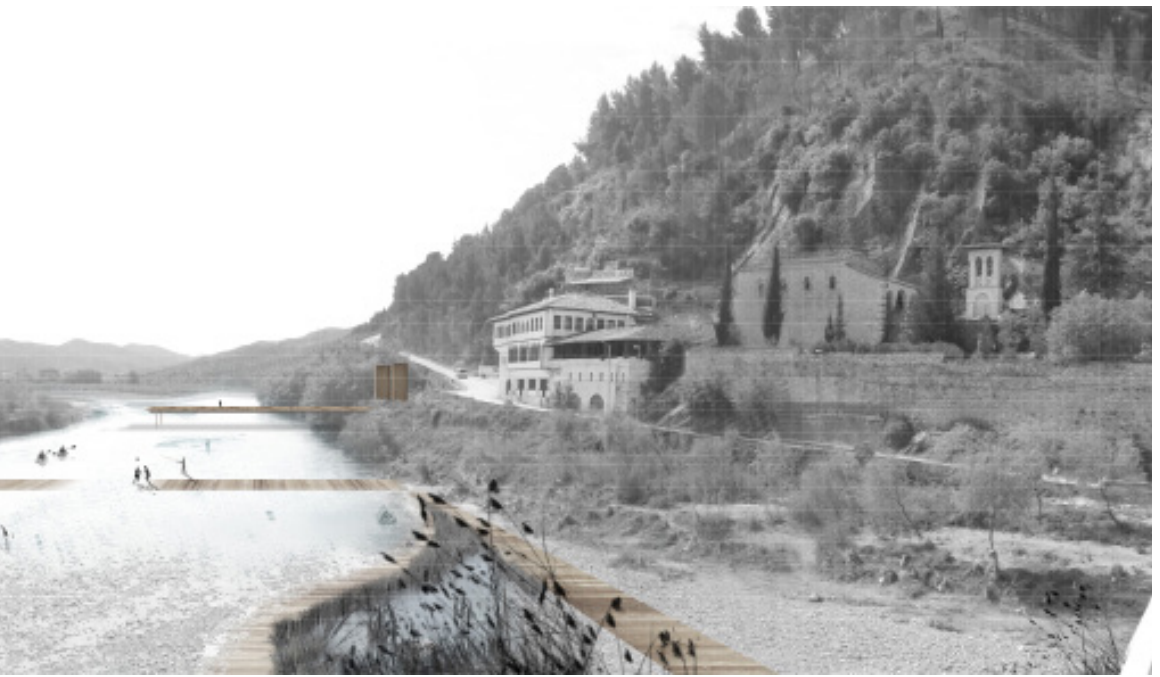
In practical terms the strategy to make Berat city and Osum Island become resilient to flooding situations and anticipate water inundation is to propose a ‘toolkit of resilience’ that can be implemented in different phases and applied to similar riverside or seaside conditions around Albania. The approach divided in stages and potential conditions of improvement makes it suitable and applicable in other territories of similar conditions and open to similar climate change risks.

Conclusion

Landscape is an open system, it is a Medium uniquely capable of responding to temporal change, transformation, adaptation, and succession. These qualities recommend landscape as a medium uniquely suited to the open-endedness, indeterminacy, and change demanded by contemporary urban conditions. As Stan Allen puts it:

“landscape is not only a formal model for urbanism today, but perhaps more importantly, a model for process.”

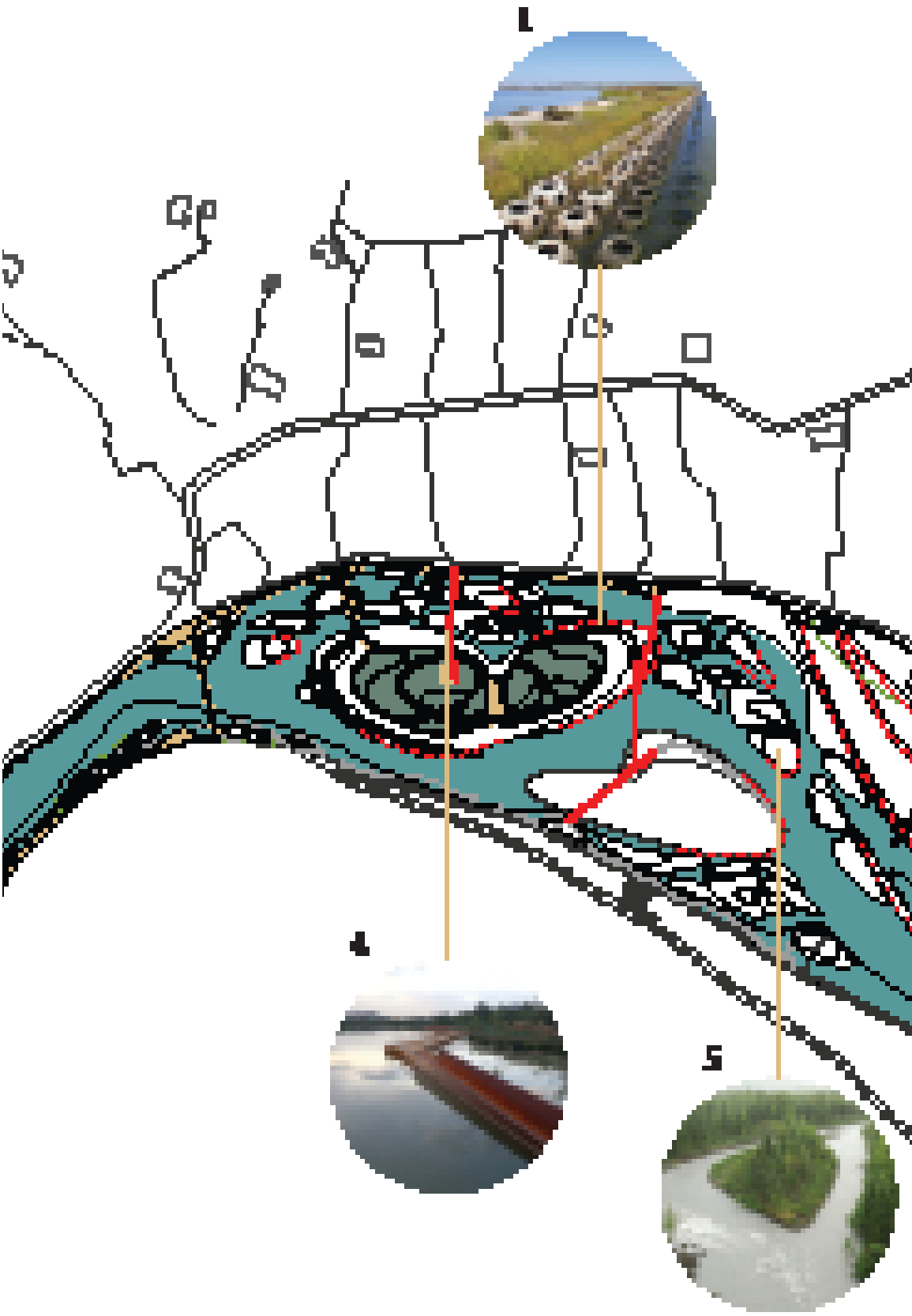




*Fig7 / Project river view
source / competition panels*



*Fig8 / Berat competition model
source / tred studio, Tirana*



1. Reefballs for island and riverbank protection and creation/strengthening of riparian vegetation.
2. Sloping edge with riprap/rubble.
3. Stepped edge with retaining rope gabion walls with integrated pedestrian path.
4. Suspended pedestrian bridges to guarantee connection between opposing river banks and the island and the city.
5. Small islands for slowing and managing river water flow.
6. Natural pools for water overflow storage.



Fig9 / Toolkit localization
source / competition report

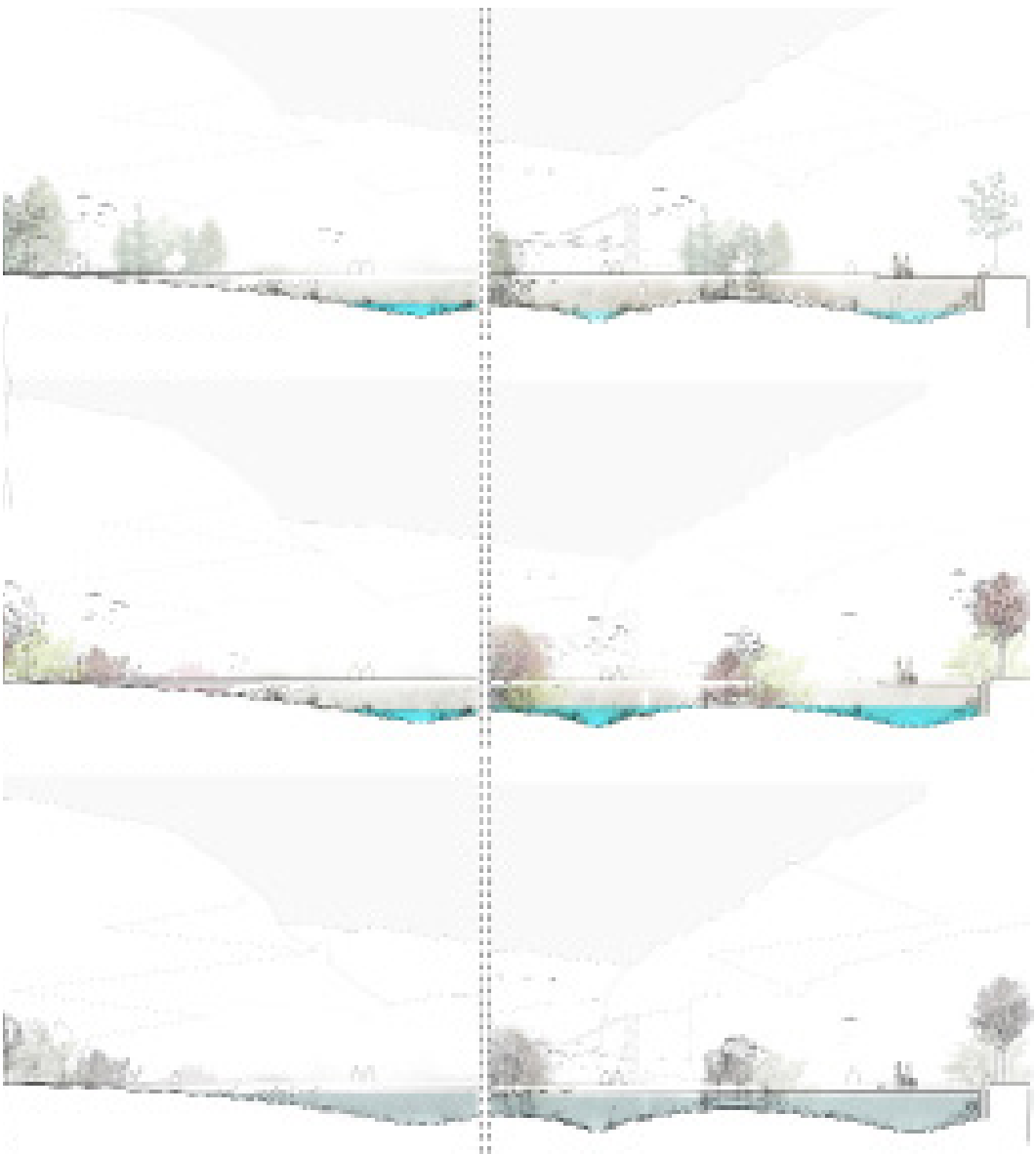
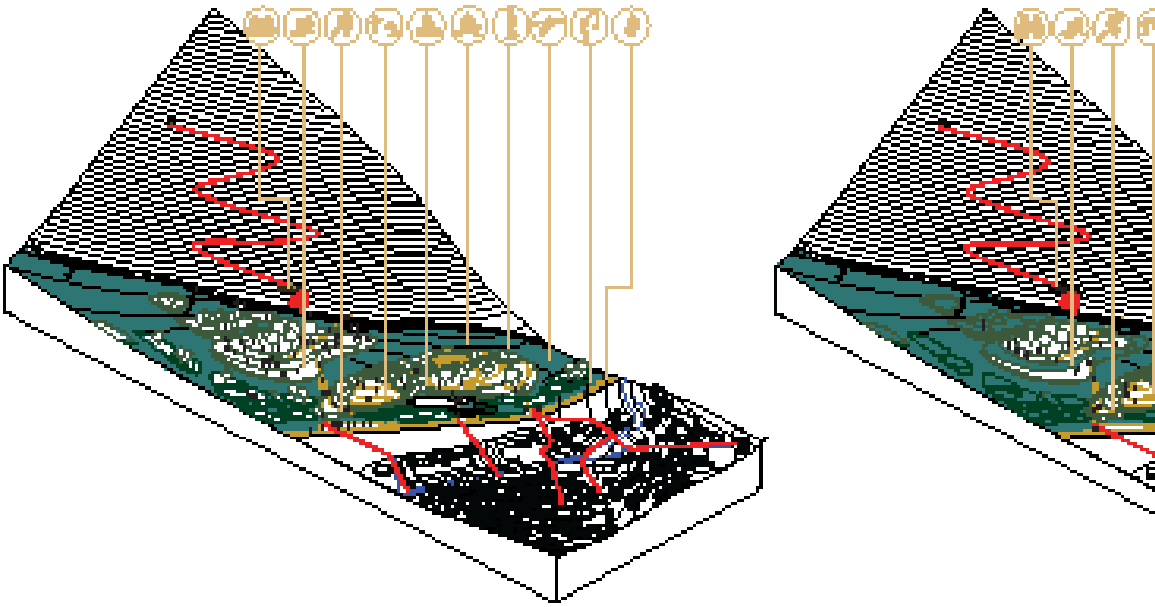
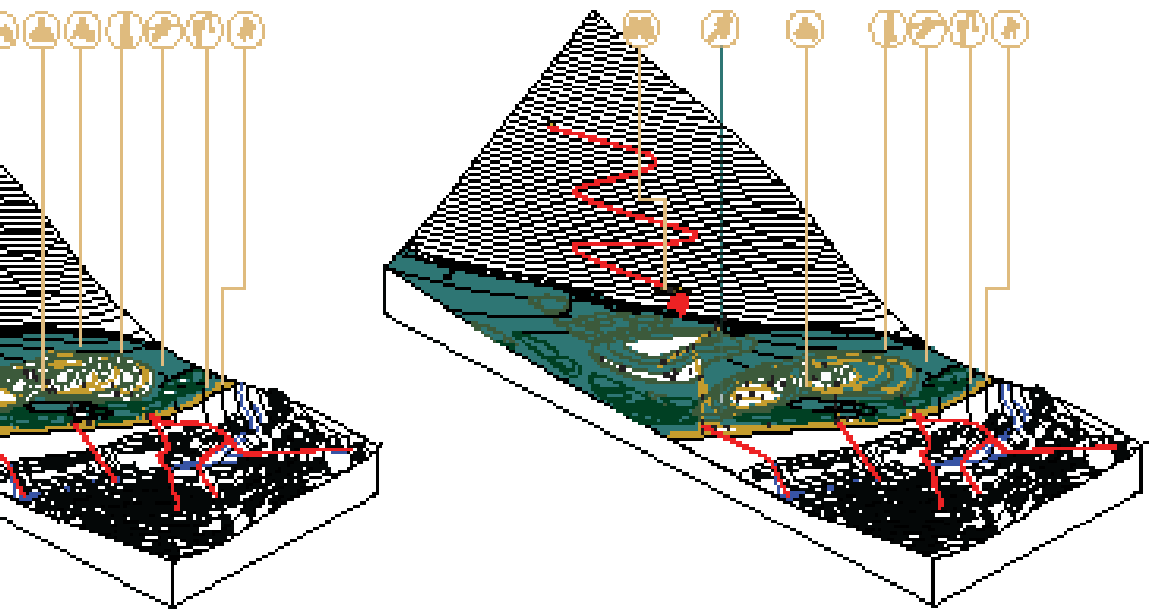
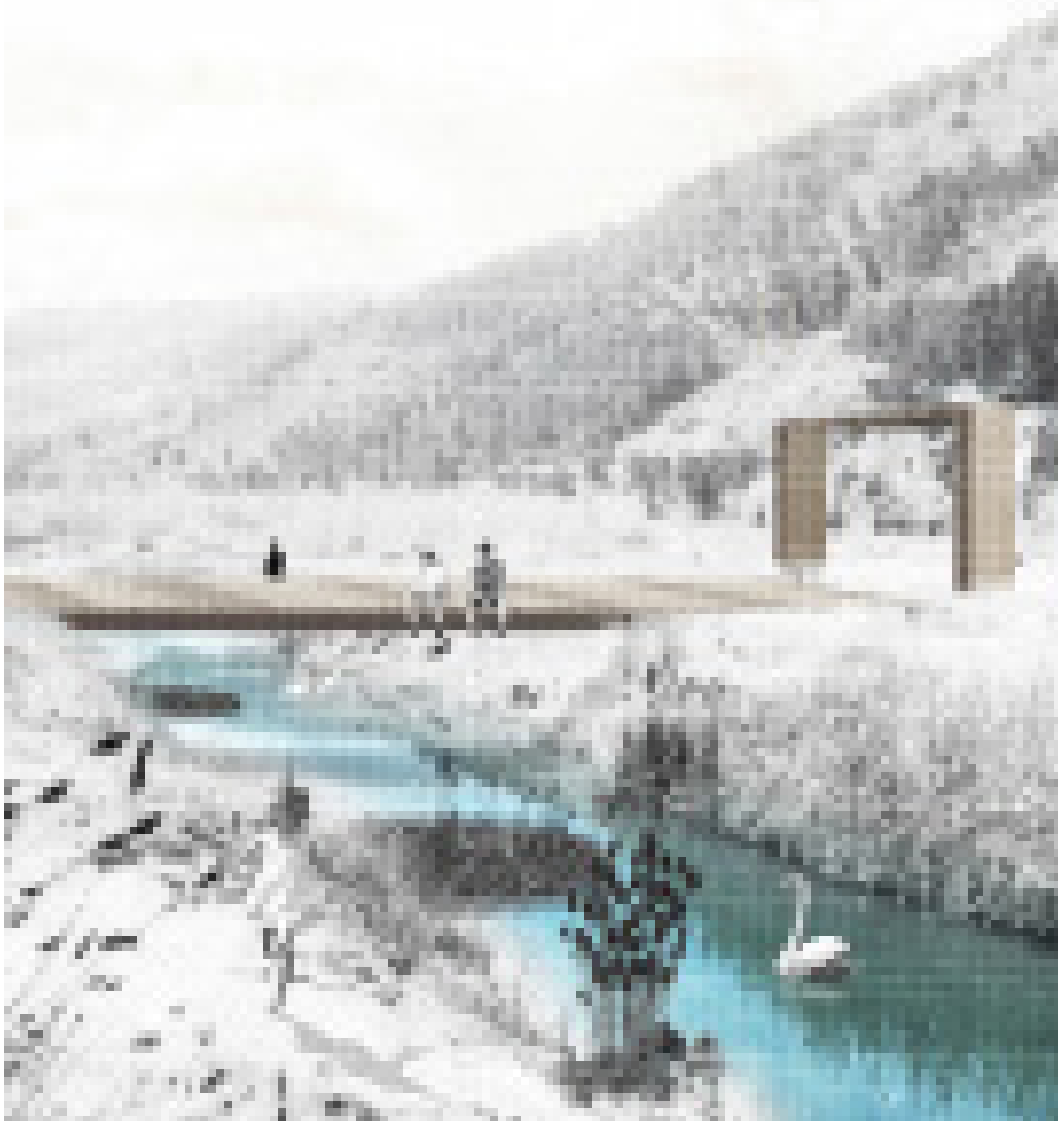


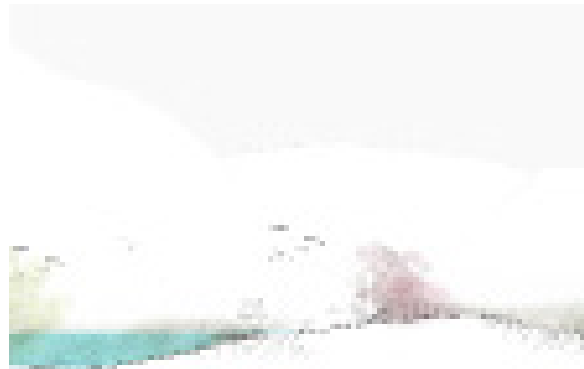
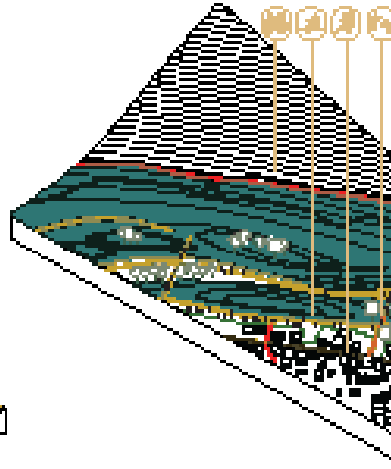
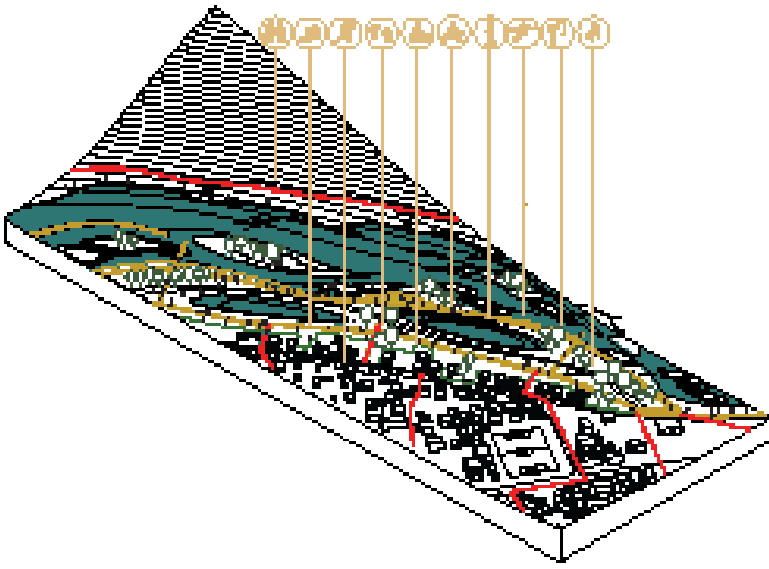
Fig10b / The rise and fall of river – sections in A area source / competition panels

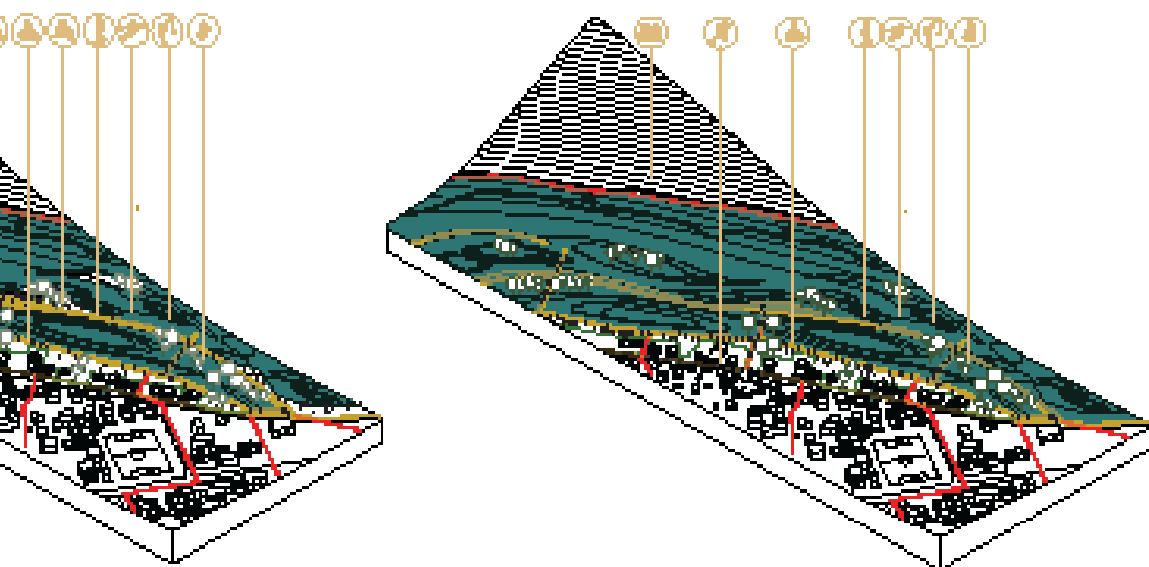


*Fig10a / The rise and fall of river – scenarios in A area
source / competition panels*

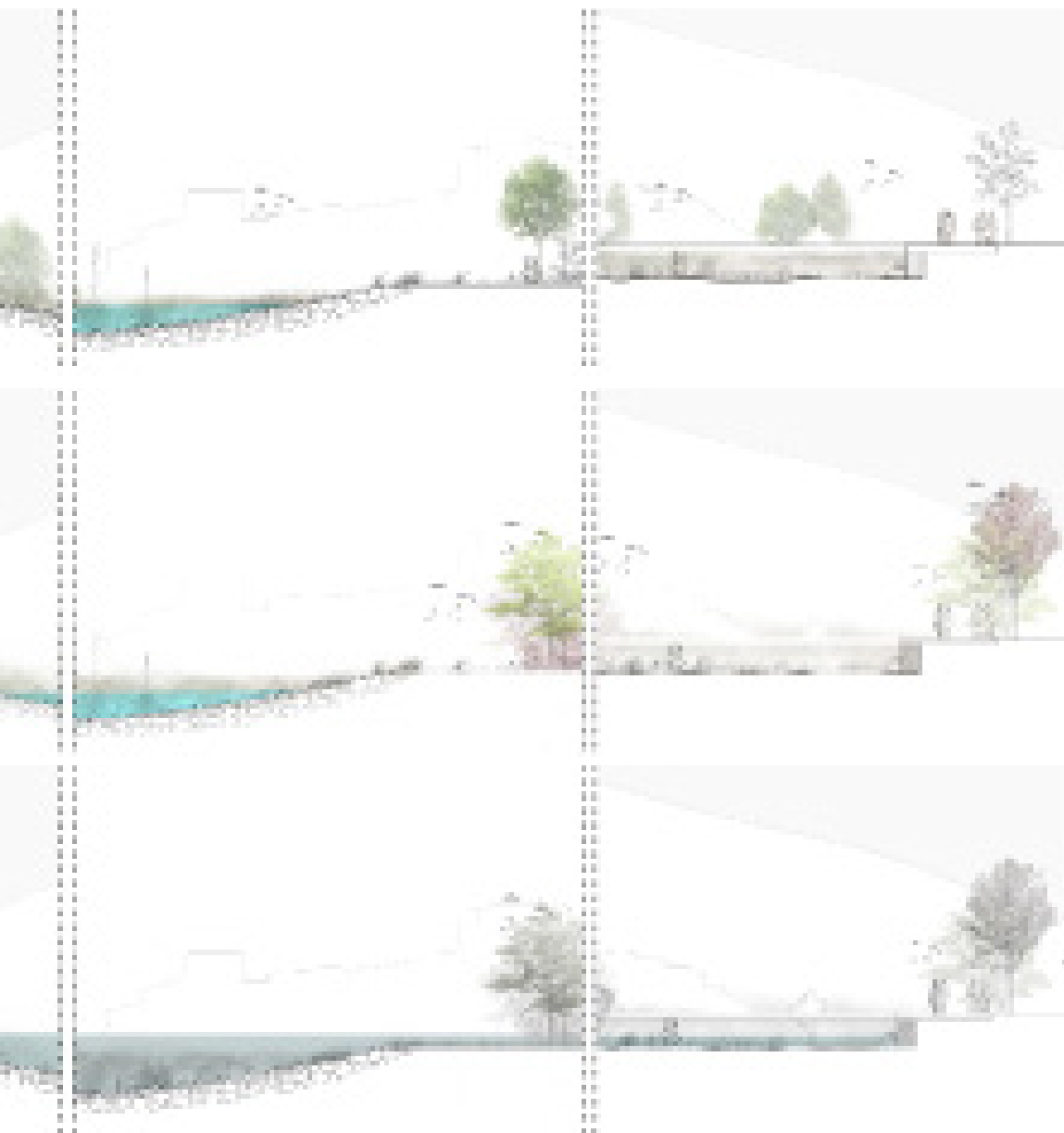


*Fig10c / The rise and fall of river – view
source / competition panels*





*Fig11a / The rise and fall of river – sections in B area
source / competition panels*



*Fig11b / The rise and fall of river – sections in B area
source / competition panels*





*Fig12 / View of the project
source / competition panels*