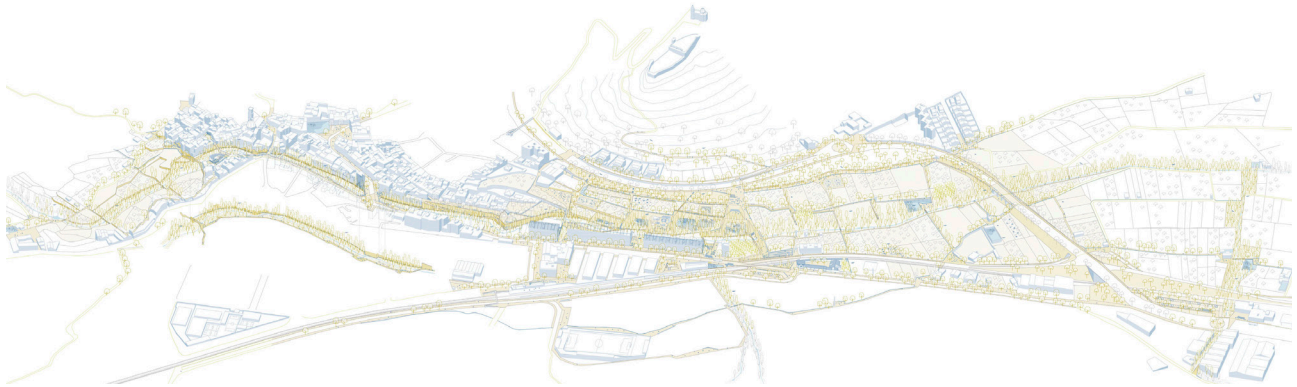


Chiva (ES)

BREATHING BACK



A NATURAL OPPORTUNITY: CHIVA'S RAVINE AS A LANDSCAPE REPAIRING DEVICE

Chiva's position on an alluvial flood plain with recurrent karstic emanations and a high phreatic level, make water an essential element of the landscape formed by the Chiva ravine. It was probably this presence of water that led the first settlers to settle in this place, and proof of this are the numerous examples of hydraulic heritage to be found in the municipality.

Despite this, over the years, the abandonment of the ravine and the growth of the town turning its back on it has meant that it has become an area used exclusively for infrastructural purposes, with polluted water and rubbish often flowing through it. With this in mind, facilitating access and uses in the ravine would restore its high natural value.

In fact, the position of the ravine between two large-scale river corridors not only favours renaturation, but also requires a larger-scale view that allows the ecosystemic discontinuities of the territory to be stitched together, thus ensuring greater resilience to global warming.

Within the proposed renaturalisation, the productive activities that settle and shape the landscape must also be foreseen. The recovery of productive land leads to the maintenance of an image of a cultural landscape that protects the value of its identity and ensures its protection against extractive projects that contribute little to the residents of Chiva.

As mentioned above, the strong geomorphological and hydrological conditions of the site mean that special attention must be paid to flooding. Recognising flooding as an intrinsic characteristic of the territory leads to the understanding that it must be given its space in order to coexist with it in the best possible way, avoiding as much damage as possible, both economic and social. At this point, it is worth remembering that global warming leads to more extreme and catastrophic situations with shorter return periods.

Based on these three main branches, a holistic solution is proposed to connect ecosystems on a large scale, providing space for flooding and improving the quality of the water flowing through the ravine without losing sight of the hydraulic memory of the territory, the productive use of the surrounding cultivated landscape and the natural and historical heritage of the village.

A TERRITORIAL STRATEGY: CONNECTING WET LANDSCAPES FROM LARGE SCALE LINKS IMPROVING WATER AND AGRICULTURE TO SAVE THE ALBUFERA FRAGILE LANDSCAPE

The Chiva's ravine is the second largest water supply to the Albufera Natural Park, which means that improving the quality of the water that reaches this natural site is a key point in terms of environmental care. Considering the progressive reduction in rainfall and the change in the regularity of rainfall patterns, this natural lake in front of the sea is in constant danger of being salinised, either due to a rise in sea level or a lack of fresh water. Taking into account the possible upstream contributions, such as in our case the EDARs of Buñol, Chiva and Cheste may favour the arrival of a constant supply of water. In addition, if we look at the existing fluvial corridor of the Chiva's ravine, we will notice that it connects the protected agricultural landscape of the Horta de València with the future protected area of the Hoya de Buñol with all that this entails in relation with eco-systemic continuities. Embracing this scenario as a territorial project opportunity, we consider that the best way to bring the use and quality of water and agricultural production to a stage of ensured coexistence is to establish an area that functions as an Agro-Fluvial Park concerned with the different realities of the territory at all possible scales.

TRANSVERSAL CORRIDOR: LA HOYA AGRO-FLUVIAL PARK RECOVERING A NEW PRODUCTIVE WATER LANDSCAPE

We can compare the importance of the Chiva's ravine fluvial corridor towards the Albufera with that of the Buñol river as a contributor of the Xúquer river. Taking this into account, we can see that the Agro-Fluvial Park could function as a transversal intermediate corridor between both systems, offering greater resilience to the ecosystems and establishing ecological continuities and as a catalyst for slow mobilities network and natural activities. In the perpendicular direction, where it could be seen as a discontinuity or linear cut, the inflows of the ravines that form a warp in the territory woven by the Chiva's ravine are enhanced and reinforced. Another aspect to bear in mind are the aquifer recharge points, which leads us to understand the connector Park as a sort of funnel for the groundwater recharge, which is currently under a high level of water stress due to the intensive agricultural use. Thinking of an Agro-Fluvial Park that operates taking into account the natural values of the environment and the management of its resources makes it a more resilient and sustainable productive model over time and therefore long-lasting. From a territorial scale, the park works as a sequence of six chained parks (1221, 86 Ha) where their characterizations respond directly to their territorial conditions and their participation in improving the park's water cycle.

In this way, the first park solves the contact with Buñol, becoming an Urban Ecotone (128.71 Ha). It continues with the Water Park which recovers some old quarries into spaces for lamination of flood water as well as incorporates devices for supplying and improving the ravine's water (419.52 Ha). The South Agricultural Park becomes a fully regenerated productive landscape at the same time as it incorporates the new connections (gates) and territorial scale services (parking lots, equipments) necessary for a park of this scale (236.87 Ha). As we get closer to Chiva, the Park incorporates an equipped edge that makes it possible to solve the contact with the industrial area of La Pahilla, acting as a filter and gateway to the Central Agricultural Park (266.16 Ha). The contact with Chiva becomes a territorial funnel that brings together and concentrates all the new ecosystems incorporated into the park and brings them closer to the city, becoming a true urban ecotone and, at the same time, a new centrality: the new natural, water and social heart of Chiva (49.47 Ha). Finally, the meeting with Cheste takes back the original identity of the place, becoming the North Agricultural Park (121.14 Ha) as the end of the sequence of parks with different characteristics but articulated longitudinally by the new fluvial park of the ravine.

A NATURAL OPPORTUNITY: CHIVA'S RAVINE AS A LANDSCAPE REPAIRING DEVICE FROM URBAN BARRIER TO A CONNECTING NETWORK OF FLOWS AND ECOSYSTEMS

The immediate surroundings of Chiva are crossed by infrastructures of different dimensions that sometimes cut through the territory. These scars could be softened and profited if they were conceived to incorporate as many flows as possible, which means that slow mobility routes should coexist with them to improve pedestrian, bicycle and fauna connectivity with pleasant, shaded promenades and corridors. It is worth remembering at this point the important network of footpaths and bridle paths that exist in the area. From the Old Road from Valencia to Madrid, to the Gestalgar ravine and the Old Road from Buñol, we can glimpse a neural network of routes that adapt to the territory and recognise it as a canvas for their activities. And although one of the first uses that the landscape, full of fields, is the agricultural production, in reality, on a larger scale, this landscape also offers new answers and opportunities. If we keep our eyes on the Sierra de Chiva, we see that its nearly 9000 hectares are capable of storing 51,805 tonnes of carbon dioxide each year, if this is transferred to the proposed Agro-Fluvial Park we see that all those crops that they feed are also capable of absorbing 16,802 tonnes of carbon dioxide in just one year. As stated in the Generalitat Valenciana's carbon stock guide, from which the values for the approximate calculation of the absorption power of these ecosystems are taken, thinking about this ecosystem service on a large scale allows us to change the paradigm of land use planning.

On a human scale, these territorial continuities are transferred to the fact that a person can start to walk from the urban core without encountering a break, finding multiple landscapes of great cultural and ecological value along the way.

LOOKING FOR AN ELONGATED CENTRALITY THE RAVINE AS AN OPPORTUNITY FOR THE CITY AND TERRITORY ARTICULATION

The connector between river corridors that the Chiva ravine represents, once it enters the urban area, becomes a cut that the city has been turning its back on over time. It is for this reason that the possibility of acting on it should be taken advantage of in order to guarantee a better relationship between the realities that occur on both sides of the watercourse. Therefore, taking into account the different casuistry, different ways of linking the village are proposed. On the one hand, three connections of a larger scale logic are established, connecting the Sierra de Chiva Municipal Natural Park with the Castle Protected Environment, the centre of the village and the Hoya de Bechinos. To the existing connections are added a series of flood crossings that enhance the pedestrian connection on both sides of the ravine. This desire to connect responds to an improvement in the use of the network of facilities that exist in Chiva. Furthermore, the ravine becomes not only a place to stroll but also a place to stay through the rethinking of the existing bridges that cross it and the addition of new ones. These points of contact between the urban and the natural become true catalysts of activity, three nodes (Alfarería Square, Old Town Gate and Bechinos Gate) where activities are generated through facilities that are metabolically related to the park, capable of attracting external agents; public spaces where to be, rest or play among the treetops; or in flow condensers where the different levels of the ravine and the city communicate. In the end, the backs go from rejecting the ravine to breathing through it.

WATER TOPOGRAPHIES: LIVING WITH THE FLOOD

A PARK THAT DRAINS THE TERRITORY BY GIVING SPACE TO WATER

The recurrent flooding events and cold drops (expected to increase in the future) in Chiva and in the Spanish east coast in general mean that any action in the ravine must consider the possibility of improving the response of the territory to these events. The option taken in the project is to give space to the floods by means of terracing filled with riparian vegetation (flood forest), slowing down the speed of the water, thus reducing runoff and guaranteeing better infiltration into the ground and therefore a greater uptake of water in the aquifers. These flood forests are made up of two areas: the forest itself, the part closest to the river, and a second area intended for infiltration over a longer period of time. Moreover, as it is a controlled flooding, since the ravine has more space to grow freely, the compatibility of activities with the flood landscapes is easier. In this way, the flood amelioration mechanism is shown as a landscape that is capable of becoming heritage, and a repairing device for a nourished and resilient soil.

WATER INFRASTRUCTURE: FLOWS AND RESURGENCES

MAKING A PERMANENT CLEAN WATER NETWORK FOR ALL THE PARK INHABITANTS

Before the appearance of other ways of obtaining energy, many of which have led us to the climatic situation in which we are immersed, it was common to settle in the territory and take advantage of the energy it can provide. Proof of this is the extensive network of hydraulic heritage that can be found in Chiva. From the waterwheels, nowadays disappeared, that raised water from the wells of the Armajal to fill the ponds that would later feed the network of irrigation ditches that by gravity irrigated the fields through which it passed. In any case, there were ponds that had a different purpose: to store enough water to be able to move a mill and grind wheat or olives. Of course, these ditches served as a feeding network for community meeting points such as washing places, which in the poorest cases were only a widening of the ditch itself. It should be borne in mind that not all the water flowing through the irrigation channels had to be extracted by means of waterwheels, but in some cases the territory itself, due to the karst layout and a high water table, produced springs such as the San Isidro or Nacimiento springs.

The proposal aims to enhancing the value of all this hydraulic heritage, at least taking it into account in the park's layouts, but in most cases reactivating it and connecting it with new gravity irrigation networks that complete the existing ones. Likewise, new fountains and ponds are incorporated into this identity, achieving a constant presence of water in the entire environment and allowing for the creation of a renewed hydric identity which also provides hydration and humidity to the vegetation, animals and humans.

RAISING NEW HABITATS: DESIGNING OPTIMAL LANDSCAPE CONDITIONS

RECOVERING THE NATIVE ECOSYSTEM: A RAVINE FULL OF LIFE

One of the main problems of the Chiva's inner city today is the lack of biodiversity in public space, representing an eco-systemic cut wherever it is found. To mitigate the effects of this stain of homogeneity, actions in the ravine must take into account both human and non-human needs. This is why a series of biodiversity nodes appear in the gully bed, designed to act as buffer zones between the spaces for humans and those exclusively for vegetation (herbaceous, shrubby and arboreal), animals and insects. At these points the vegetation responds to the patterns found in riverside ecosystems, adapting the plant strata to the needs of the place. On the other hand, in the dividing walls of the buildings that denote a poorly thought-out solution and that do not face the street, biodiversity boosters are installed to function as insect hotels, bird nests and stepping stones for pollinators that connect the ecosystems at higher scales. All these spaces sprout from the skeleton of the water, which, as it passes through, causes biodiverse ecosystems to grow, forming a new, continuous landscape.

This structural wet habitat is combined along its course with other cultural landscapes rooted in the territory, such as the rainfed fields of almond and carob trees or the Mediterranean forest, present on the hill of the castle, in some plots and discontinuously on the margins of some roads. The project is committed to a continuity of these systems in order to interweave and combine them, becoming an ecotone with biodiversity as its flagship.

IDENTITARY PATHS: RECONNECTING WATER AND CITY LEVELS

A THREE-DIMENSIONAL CARPET FOR THE NEW USES OF THE PARK

One of the main objectives of the project is to make the ravine walkable and accessible along its entire length, in a balance between human leisure and the continuity of the riparian ecosystems. This continuity is to be guaranteed by means of a soft floodable path next to the water and parallel to it, running from the Armajal to the Hoya de Bechinos, passing through the centre of Chiva. However, the coexistence of the routes with the flooding makes it inevitable that an alternative network to the flooded route should be considered. Although the enlargement of the space occupied by the ravine channel largely frees the street network of the town centre from the devastating effects of flooding, the routes at water level are not practicable in scenarios with a return period of ten years. This is why this second mesh, linked to the network of the Agro-Fluvial Park and connected to the streets of the village, will act as a new protected pathway that continues to connect the activities that appear along its route. The network connects the new facilities at each end of Chiva, such as the Pottery (Alfarería), the Oil Press (Almazara) and the Bechinos Washhouse Equipment, and is energised by ground floors and shops reactivated with minimal investment, giving strength to the social urban fabric and forming a diverse carpet in the union of routes between urbanity and nature. A third grid of rarely-floodable intermediate paths is proposed in those sections where the Park widens.

The new facilities proposed, mostly in refurbished heritage buildings, will become HUBs that will condense activities linked to agriculture, water and ceramics, both in terms of education, entrepreneurship and dissemination. The aim is to boost the local economy in a sustainable way and interconnect it with the network of existing buildings, both in use and reactivated.

REACTIVATED MEMORIES: HERITAGE AS A SOCIAL URBAN TRIGGER FROM ISOLATED HERITAGE BUILDINGS TO A NETWORK OF REDISCOVERED IDENTITIES

Most of the heritage found in Chiva is not the result of a project but due to the passage of time and history over the territory. In order to make it more dynamic, it is essential to understand it as a whole and not as isolated facts in the urban fabric. It is therefore interesting to weave a network of interconnected paths that link all the points susceptible of being heritage sites. One of the highlights in common of all these routes is the great availability of beautiful, open views over other points of the landscape due to the position of the village. But in particular, from the Castle hill you can see the plain of Valencia, which is also a protected area. Descending from it are various terraces worked with dry stone, a unique element of the cultivated landscape of the Mediterranean slope. It is these cultivated landscapes that give rise to many trees that have become monumental over the years, most of which are carob trees. And it is linked to the cultivated landscape that all the hydraulic infrastructures mentioned above appear. Therefore, there is no better way to enjoy this agricultural landscape heritage than by visiting one of the different places in Chiva where you can taste the typical dishes of this land. This richness allows the creation of multiple itineraries that consist not only of visiting the sites but also of experiencing them through sustainable activities and routes that include the town centre, with buildings and singularities of great interest, transmitting a whole cultural identity and a citizen's interest in its preservation.

IMPLEMENTATION PROCESS

YEAR 0	Increase in the water flow of the ravine from the Buñol EDAR Sanitation of the invasive vegetation of the ravine Flood topographies Implementation of nurseries to supply the park
YEAR 1	Plantation of riparian buffers (the ravine is not yet accessible to people) Activation of the 2 gateway equipment nodes (Alfarería – Almazara) Construction of biodiversity boosters
YEARS 2-4	Water path Intermediate path Bechinos flood ford Interventions on existing bridges
YEARS 5-10	Progressive implementation of social uses inside the park New Bridge – Equipment – Square in Bechinos Redevelopment of urban roads

BREATHING BACK

The new heart of Chiva becomes a floodable ecotone which weaves together the hydraulic heritage, the existing paths and continuities and the ecosystems; an elongated centrality that enhances flows and activities with three main nodes distributed along its course. Chiva goes from turning its back to breathing through it.