

Country / City Spain / Valencia
University / School UPC / Escola Tècnica Superior d'Arquitectura del Vallès
Academic year Title 2017-2018
of the project The Horta Nord Irrigation System
Authors Adrian Álvarez Barcial, Miguel González Fernández, Andrea Nyc, Julia Kristin Voller



PERFORMATIVE NATURE

Barcelona International Landscape Architecture Biennial

September 2018 **Barcelona**

SCHOOL PRIZE

X International Landscape Architecture Biennial

Máster d'Arquitectura del Paisatge -DUOT - UPC

ETSAB- Escola Tècnica Superior

d'Arquitectura de Barcelona

Avenida Diagonal, 649 piso 5

08028 Barcelona-Spain

TECHNICAL DOSSIER

Title of the project	The Horta Nord Irrigation System
Authors	Adrian Álvarez Barcial, Miguel González Fernández, Andrea Nyc, Julia Kristin Voller
Title of the course	Cultural Landscapes
Academic year	2018-2018
Teaching Staff	Carles Llop, Josep Maldonado, Gemma Milà, Artur Tudela
Department/Section/Program of belonging	Departament d'Urbanisme i Ordenació del Territori a l'ETSAB
University/School	UPC / Escola Tècnica Superior d'Arquitectura del Vallès

Written statement, short description of the project in English, no more than 250 words

Cultural landscapes are territories (urban and rural) with plenty of history and content that express the human action of nature transformation and unique landscape construction. When renewing territorial projects, the aim is to further the cultural value possibilities, assigning the knowledge of the landscape using local sciences. This kind of multidisciplinary approach is intended to help understand the site complexity. The landscape is a great reminder of the historical heritage while at the same time the contemporary situation of the region. These old territories, with their large heritage, lead us to explore their cultural landscape condition.

The Horta Nord of Valencia is an area filled with history and heritage shaped by the work of its society. Its irrigation system started at 8th century. These days, cultural landscapes still live on thanks to their land production and habitability. Cultural landscape has to be approached with the collaboration of people who preserve its heritage alongside concerned institutions, local citizens and those who want to sustainably develop. Also, we focus on the analysis of projects that promote the local development of territories and cities in an holistic perspective without trivializing the territory.

Accordingly, we reveal cultural landscapes through the elaboration of an Atlas with multidisciplinary knowledge. Each group explore and give a vision of the area through the analyze of a territory's layer.

The rural territories constitute socio-landscape heritage in contrast to urban transformation. This landscape heritage doesn't refer only to the past but also the future, to feed territories with food sovereignty.

For further information

Máster d'Arquitectura del Paisatge -DUOT - UPC

T: + 34 93 401 64 11 / +34 93 552 0842

Contact via email at: biennial.paisatge@upc.edu

Consult the web page <http://landscape.coac.net/>

THE GAME AS AN EDUCATIONAL DYNAMIC



DYNAMIC PHASES

Once all the letters are distributed, each participant is located in its territory and associates it with the demand for crop that has touched him, this demand is represented by a drop of water t. Then the Major places on the table the period, where the units of water available for the entire turn (12U, 24U, 36U) are represented.

The total units of water in the dry season, represented by a drop of water, are making their way through the "sequia", in a territorial order, where they are "spending" all the units according to the demand of growing the territory where it happens.

These units can be modified (+ 1 / -1) using the water well / drain cards. These cards are interchangeable between the agents (since it is a private condition and can be negotiated.)

The final goal is that once the last turn arrives, everyone has been able to reach their demand, but that the rest of the water is 0. No extra water, No dry field. All the agents must be agreed and they must succeed their demands..

DYNAMIC TARGETS

Know the Agents that are part of the water management and link them to the territory. Understand and manage across with the relationship between the given situation and the demand for cultivation.

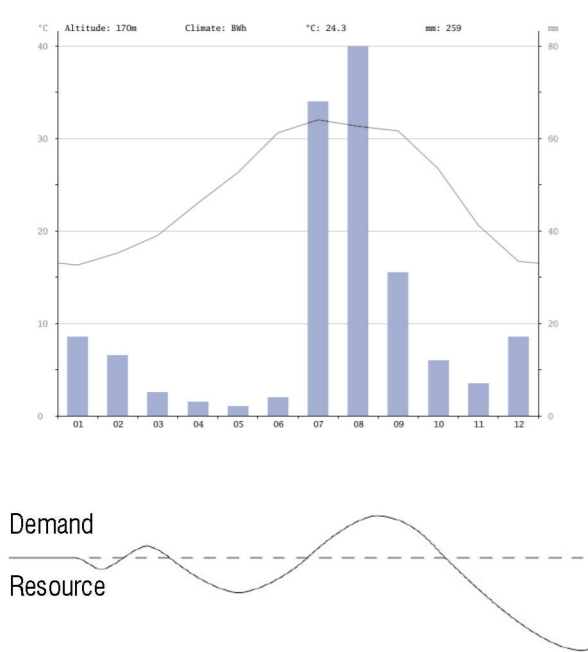
Promote direct and personal communication of all agents, where dialogue, debate and understanding are essential for everyone to gain.

Each turn generates multiple situations and the solution to all of them are the same, be aware of the resources and the demand of the territory, use the mechanisms to manage the water and reach an agreement with all the syndicates so that collective system be equitable for all. The communication is the main key that could give improvement strategies and solutions.

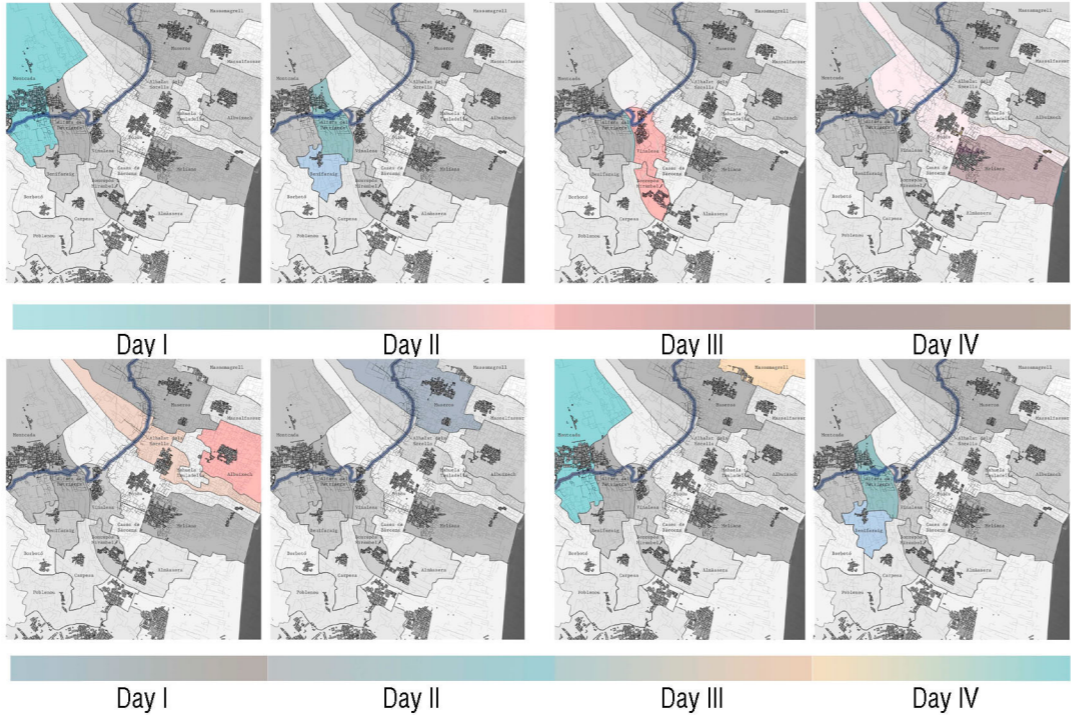


IRRIGATION WATER SYSTEM OF THE HORTA DE VALENCIA

Climatic data



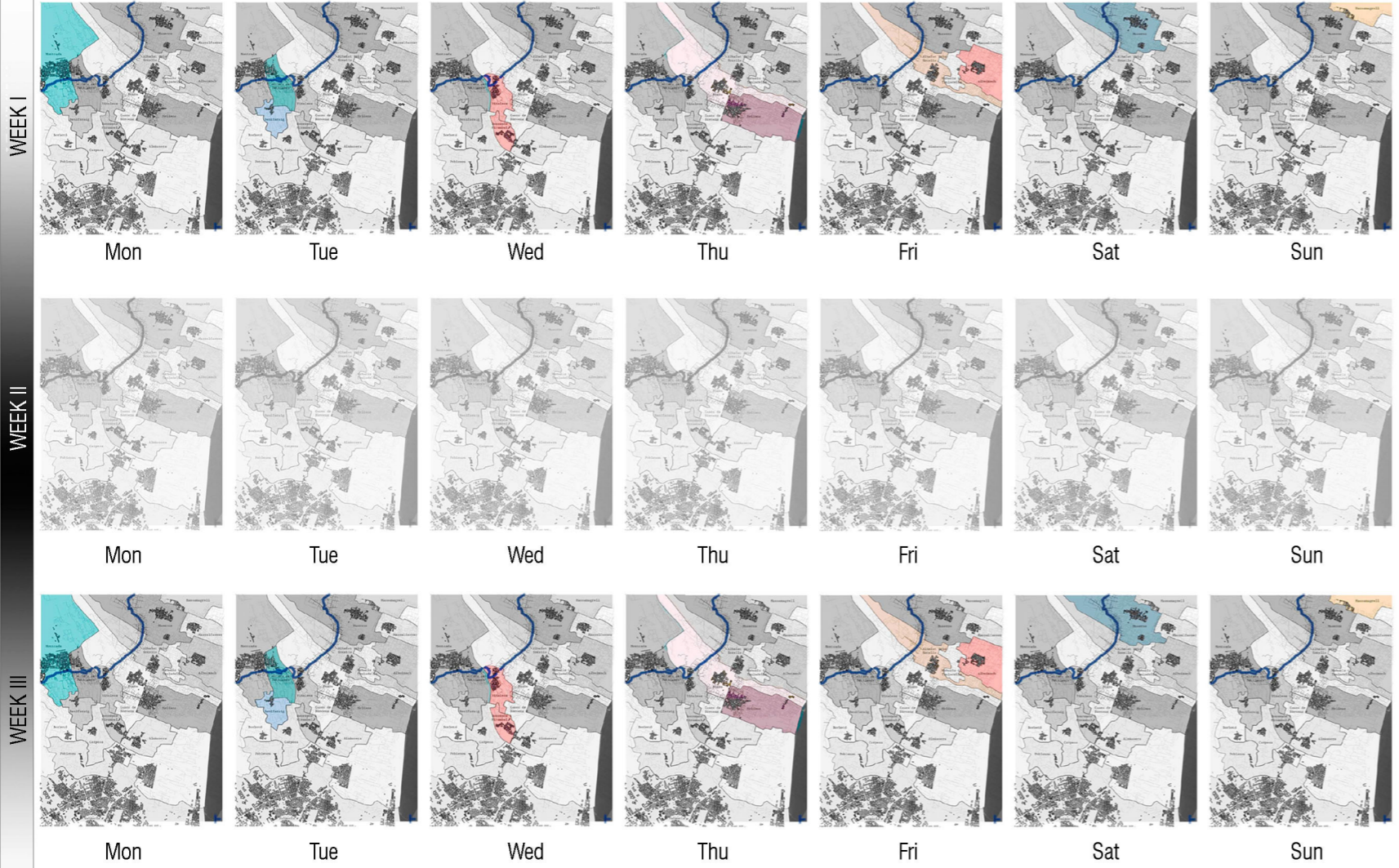
TURN-BASE SYSTEM: IRRIGATION TIMMING



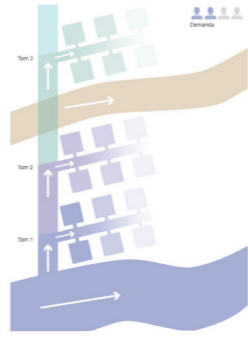
Water availability

Water Demand	Water availability		
	Fertile season	Dry Season	Flood season
High	Turn-based system + water well	Turn-based system + water well	Sewer system
Low	Turn-based system	Turn-based system + water well	Sewer system

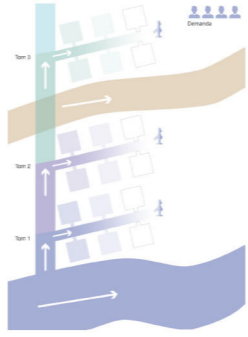
TURN-BASE SYSTEM: WEEKLY IRRIGATION IN THE TERRITORY



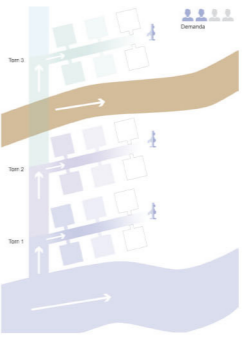
Crops with much need of water in abundant period



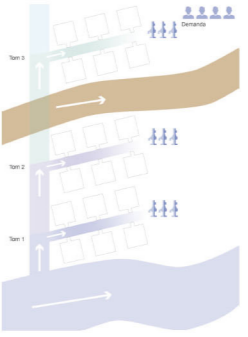
Crops with little need of water in abundant period



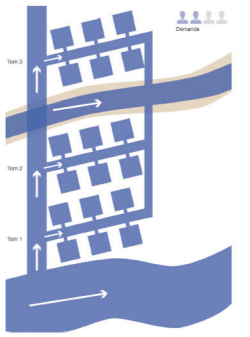
Crops with a high need for water in the dry season



Crops with a little need for water in the dry season



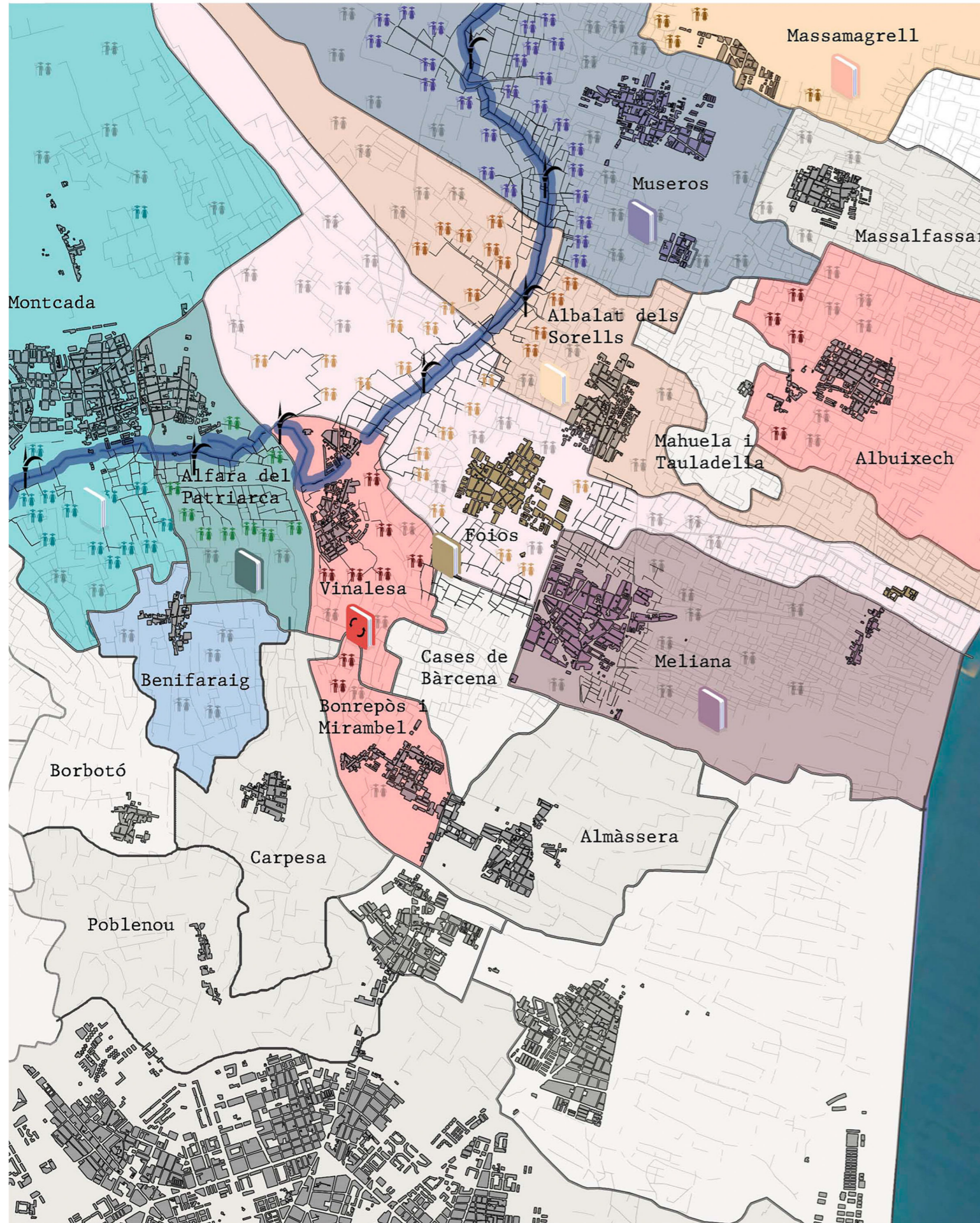
Crops with a high need for water during a flood.



Crops with a little need for water during a flood.



AGENTS OF THE IRRIGATION WATER OF THE HORTA DE VALENCIA



THE COURT OF THE "SEQUIA REAL DE MONTCADA"

The court is made up of the major, the secretary and two syndics. The court imparts justice in the sequia society. Farmers and irrigators have the right and the obligation to denounce any inadequate management of water.



THE BOARD OF GOVERNMENT

The board is made up of the secretary, the major and the twelve syndics. Government and law of the canal. Connector between the situations in the horta and the interests of the irrigators. Manages the collective system.



THE GENERAL BOARD

It is the voice of the territory. Its character is symbolic.



THE SEQUIER MAJOR

The Sequier major is the character in the cultural landscape of the Reial Sequia de Montcada. It is chosen from the community of irrigators by the twelve syndicates which represents the territory.



THE SECRETARY

The secretary is the administrative figure of the institutions of the Reial Sequia de Montcada.



THE SYNDIC

The syndic represent each community of local irrigators. The communities are linked to the historical territorial entities. These are Paterna, Montcada, Meliana, Godella, Foios, Albarat of the Sorells, Museros, Massamagrell, El Puig and Pucol. Two rotative syndicates represent groups of smaller farmhouses. The syndicates are elected democratically and alternate every three years.



THE GUARD

The guard is the executing arm of the síndic and the transmission channel between the irrigator and the síndic. He has the job of opening and closing the passage of water in the different areas.



THE LLAURADORS (FARMERS)

The Llaurador is the worker of a land, responsible, manager of land, water and relationships that are established between the countrymen and the landscape.



THE REGADORS (IRRIGATOR)

He is the irrigation manager. They manage the irrigation and cultivate the soil.