

# ACQUA COME PATRIMONIO

Esperienze e *savoir faire* nella riqualificazione  
delle città d'acqua e dei paesaggi fluviali



a cura di  
**Romeo Farinella**





Education and Culture DG

## Culture Programme

Il presente progetto è finanziato con il sostegno della Commissione europea.

L'autore è il solo responsabile di questa pubblicazione (comunicazione) e la Commissione declina ogni responsabilità sull'uso che potrà essere fatto delle informazioni in essa contenute.

This project has been funded with support from the European Commission.

This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

# ACQUA COME PATRIMONIO

Esperienze e *savoir faire* nella riqualificazione  
delle città d'acqua e dei paesaggi fluviali

a cura di

**Romeo Farinella**

IMPAGINAZIONE E PROGETTO GRAFICO di  
Alice Clementi, Elena Dorato

COPERTINA di  
Michele Ronconi

Copyright © MMXIII  
ARACNE editrice S.r.l.

[www.aracneeditrice.it](http://www.aracneeditrice.it)  
[info@aracneeditrice.it](mailto:info@aracneeditrice.it)

via Raffaele Garofalo, 133/A-B  
00173 Roma  
(06) 93781065

ISBN 978-88-548-5968-5

I diritti di traduzione, di memorizzazione elettronica,  
di riproduzione e di adattamento anche parziale,  
con qualsiasi mezzo, sono riservati per tutti i Paesi.

Non sono assolutamente consentite le fotocopie  
senza il permesso scritto dell'Editore.

I edizione: maggio 2013

a Marica Solomon

# ITALIA

## CO-ORGANIZZATORI



### Ente di Gestione per i Parchi e la Biodiversità - Delta del Po

Lucilla Previati - *Team Leader*

Anna Luciani

Michele Ronconi

Maria Cristina Veratelli



### Università degli Studi di Ferrara - Dipartimento di Architettura

### CITER - Laboratorio di Progettazione Urbana e Territoriale

Romeo Farinella - *Scientific Director*

Alice Clementi

Elena Dorato

Saveria Olga Murielle Boulanger

Nicola Tosi

Alessandro delli Ponti - Séminaire Robert Auzelle

Andrea Noferini

Laura Belotti

Angela Cavallo

Roberta Corradetti

Eleonora Fraternali

Silvia Tarantini

Beatrice Tassinari

Antonella Trusgnach

## PARTNERS



### Amministrazione Provinciale di Ferrara

Settore Pianificazione Territoriale, Mobilità,  
Energia, Lavoro e Formazione Professionale



### Amministrazione Comunale di Comacchio

Claudio Fedozzi  
Giuseppe Guidi



### ACER Azienda Casa Emilia Romagna-Ferrara

Daniele Palombo  
Diego Carrara  
Marco Cenacchi

## COLLABORAZIONI



### Living Urban Scape

Milena De Matteis  
Alessandra Marin  
Valeria Leoni  
Ianira Vassallo  
Barbara del Brocco  
Daniele Carfagna  
Marianna Mazzetta

# PORTUGAL

## CO-ORGANIZERS



### Gabinete para o Centro Histórico

Magda Brígida Lucas  
Paulo Leitão  
Rosa Silva

## PARTNERS



### Universidade de Coimbra

#### DArq - Departamento de Arquitectura

António Olaio  
João Paulo Cardielos - *Scientific Director*  
Rui Lobo  
Eduardo Mota  
Joana Melo  
João Pedro Pedrosa  
Luís Gonçalves  
Paulo Teixeira  
Pedro Caiado  
Tiago Martins

#### FEUC - Faculdade de Economia

Claudino Ferreira  
Paulo Peixoto  
Márcia Abreu



### CES – Centro de Estudos Sociais

Francisco Freitas  
Giovanni Allegretti  
Milton Vogado  
Nancy Duxbury



# ROMANIA

## CO-ORGANIZERS



Universitatea de Arhitectura si Urbanism *Ion Mincu*  
Centrul de Studii Arhitecturale si Urbane

Marica Solomon †

Nicolae Lascu - *Scientific Director*

Andreea Mirela China

Andreea Popa

Liviu Veluda

Iulia Catalina Cucu

Georgia Manuela Ion

Alexandra Elena Petraru

Andrei Pomana

## PARTNERS



Braila County Council (CJB)

Costel Dragan

Braila City Council - Braila City Hall (CLB)

Marian Ion

## COLLABORATIONS

Doina Bubulete

Raluca Iosipescu

Sergiu Iosipescu

# FRANCE

## CO-ORGANISATEURS



### Municipalité de Lille

Philippe Delahaye  
Mathieu Goetzke  
Véronique Falise  
Dorothee Delemer  
Richard Lemeiter  
Julien Pinon



### Fluvial Consult

Pierre Peyret  
Nicoletta Peyret

## PARTNERS



IAUL - Institut d'Aménagement et Urbanisme de Lille  
du département de l'U.F.R. de Géographie de l'Université Lille1 Sciences et Technologies

Pauline Bosredon  
Kristel Mazy  
Cédric Riviere  
Philippe Hurtaux  
Zoé Charge  
Ségolène Meheust



ENSAPL - Ecole Nationale Supérieure d'Architecture et de Paysage de Lille

Armelle Varcin  
Jean Michel Mercher  
Bénédicte Gresjean  
François Andrieux  
L'ensemble des étudiants de l'Atelier O - 2012-13

# INDICE

<b>Préface</b>	14
<i>Maguelonne Déjeant-Pons</i>	

<b>Acqua come Patrimonio. Passato, presente ma, soprattutto, futuro</b>	18
<i>Lucilla Previati</i>	

## PROBLEMATICHE

<b>Città, acqua, patrimonio. Le ragioni di un progetto</b>	28
<i>Romeo Farinella</i>	

<b>Voies d'eau, paysages: la notion de patrimoine fluvial</b>	52
<i>Pierre Peyret</i>	

<b>The social uses of rivers</b>	64
<i>Paulo Peixoto</i>	

## ATLANTE

<b>Introduction</b>	82
<i>Pierre Peyret</i>	

<b>Braila: city on the Danube</b>	89
<i>Nicolae Lascu, Andreea Mirela China</i>	

<b>Mondego: <i>the dull murmur of the river</i></b>	107
<i>João Paulo Cardielos, Rui Lobo, Paulo Peixoto, Eduardo Mota, Nancy Duxbury, Pedro Caiado</i>	

<b>Comacchio: lettura di un territorio</b>	127
<i>Lucilla Previati, Michele Ronconi, Elena Dorato, Alice Clementi, Anna Luciani, Justina Soltysiuk</i>	

<b>Lille: lecture du territoire et stratégie urbaine (pour l'eau/par l'eau)</b>	155
<i>Richard Lemeiter, Julien Pinon, Cédric Riviere</i>	

## PROGETTI

<b>Introduzione</b> <i>Romeo Farinella</i>	178
<b>Braila: the Danube in the city</b> <i>Nicolae Lascu, Andreea Mirela China</i>	187
<b>Coimbra: city searching for a river</b> <i>João Paulo Cardielos, Rui Lobo, Paulo Peixoto, Eduardo Mota</i>	207
<b>Comacchio: acqua al plurale</b> <i>Lucilla Previati, Michele Ronconi, Elena Dorato, Alice Clementi, Anna Luciani, Justina Soltysiuk</i>	227
<b>Lille: la dimension culturelle de l'eau</b> <i>Richard Lemeiter, Julien Pinon, Cédric Riviere</i>	243

## ESPERIENZE INTERNAZIONALI

<b>Proposte per una città africana</b> <i>Romeo Farinella</i>	262
<b>Prospective urbaine et changement climatique: la ville de Saint-Louis du Sénégal face au défi de la durabilité</b> <i>Mouhamadou Mawloud Diakhate</i>	266
<b>RésEAU. Saint-Louis du Sénégal: una rigenerazione che parte dal fiume</b> <i>Alice Clementi, Elena Dorato</i>	289
<b>Au Fil du Fleuve. L'argine del fiume Sénégal da limite urbano ad arteria produttiva della città</b> <i>Marco Marcelletti, Riccardo Torresi, Clelia Zappalà</i>	297



# MONDEGO

## THE DULL MURMUR OF THE RIVER

(title of a poem by Miguel Torga)

JOÃO PAULO CARDIELOS (coordinator)

RUI LOBO

PAULO PEIXOTO

EDUARDO MOTA

NANCY DUXBURY

PEDRO CAIADO

## The origin of the name

The romans called *Munda* to the Mondego river. *Munda* is the Latin word for transparency, clarity and purity. One may conclude that, in those times, its waters would be appreciated for those qualities. Through the Middle Ages the river was still called so. *Munda* seems to be the origin of Mondego, the name is given today to the river that runs near the roman city of *Aeminium*.

## Singular river

The Mondego River is, without doubt, the most recited of the Portuguese rivers by poets and writers. It probably owns the fascination it produces for centuries to the fact of running through Coimbra (the roman *Aeminium*), where, in 1290, was established one of the most ancient of European universities. The University of Coimbra was, for centuries, the only national university. The gratitude of those who temporarily lived in this town – to educate themselves, experiencing, surely, some of more or less profane life-lessons – could explain the sensibility with which they often describe the waters of the Mondego, invoking the river as a place for muses and a source of poetic inspiration, with sweetness and smoothness, that are hard to recognize in the real world. The river was always instable and treacherous, disappearing during the summer, and torrential during the floods of winter and spring.

## From source to mouth

It's quite difficult to identify the small stream of water – the Mondeguinho (little Mondego), as it is lovingly called its source – as the origin of the longest of the exclusively Portuguese rivers. The water rises in Corgo das Mós, municipality of Gouveia, in the middle of the Natural Park of Serra da Estrela, at the highest national plateau, next to the Penhas Douradas. During the first tens of kilometers, the small brook runs to the northeast, almost imperceptively down to about 450 meters altitude after doubling northwest. Along Celorico de Beira, it runs southwesterly and is then recognized as the Mondego River.

Throughout this difficult journey, the Mondego receives water from the Dão, spreading in the artificial lake of the Aguieira hydroelectric dam, and then soon after from the River Alva, flowing into the narrow rocky passage of Livrarias do Mondego. After passing Penacova, it enters its final section, which receives water from the Ceira River, next to Portela, just outside the city of Coimbra, running between the urban banks that confine it once again, and thereafter to the wide alluvial basin of the Lower-Mondego. Today we have, in this final section, an artificial course near the irregular arms of the former Old River,



an infrastructural work to control and regulate its waters, with the last phase completed in 2012. This Project to Improve the Mondego River Basin, which lasted decades and became, in some periods, one of the largest and most sizable public works performed by the Portuguese state, includes levees and irrigation canals, forming part of a complex undertaking to redirect and optimize agricultural development, and executed mainly during the second half of the twentieth century. The last flood with partial flooding of the low riparian zone of the city of Coimbra occurred in the winter of 2000-2001, despite numerous studies, projects and previous works developed over more than 200 years, and the completion of the urban dyke (Ponte do Açude) that just over 30 years ago (1981) established the current mirror of water that bathes the city. This change in the regime of urban security also corresponds to an important transformation of the climate, with reduced urban thermal amplitudes, night-time and daytime, and especially associated with peaks in summer and winter. Also the lowered pressure, which is normally associated with the permanent presence of water, allows for better urban ventilation, especially noticeable in the lower riverside.



The change in the image of the city was equally significant, from alternating between the immense sand with only a trickle of water, known as Basófiás (mendacious or charlatan) and the occasional violent floods of winter, to be replaced by a real lake that reflects the hills on both of its banks. It has also been possible to recover abandoned archaeological and historical relevant areas along the river that the invading waters had forced residents to forget over the centuries, and where we have been installing new public spaces and various urban facilities. Important investments have been made in this section but there are still many residual areas occupying a significant part of the urban margins.

After passing through the university city, the Mondego River flows towards the Atlantic Ocean, which it reaches after a 258 km route, near the city of Figueira da Foz, the traditional seaside resort serving Coimbra. Along the way, the Mondego receives water from the Arunca River and bathes the fields of the old and historic walled town of Montemor-o-Velho. It runs through the agricultural plains and extensive rice fields of the Lower Mondego, and towards an area of ancient marine salt exploration, which extends over the left margin and at its center. Then, the Island of Murraceira constitutes a fascinating artificial landscape, built and sustained over the centuries by the labour of “marnotos” (salt-pan workers) between the two arms of the river, defining the expanding estuary. Here, it receives the waters of its last tributary, the Pranto River, before emptying into the ocean through the piers of the important commercial and fishing port of Figueira da Foz.

### **The biodiversity of the Mondego**

Mondego is well known for its water’s purity, which feed a wide variety of ecosystems, from its original mountain down to the floodplains of the lower lands, and, finally, to the estuarine areas along the ocean. These waters support a diverse wildlife, which features reptiles, amphibians and birds, also feeding crops and pastures fauna agro-pastoralists.

The river is a standing invitation to recreational fishing, swimming and boating, along its entire length. In the estuary, near the mouth, stands out the environment naturally protected from the Murraceira Island, where traditional industrial production of sea salt, basic craft, remains in harmony with the coastline birds, which nest there. New aquaculture and the traditional productive systems reinvention are being designed, and will proceed slowly, cautioning the preservation of these sensitive environmental balances.

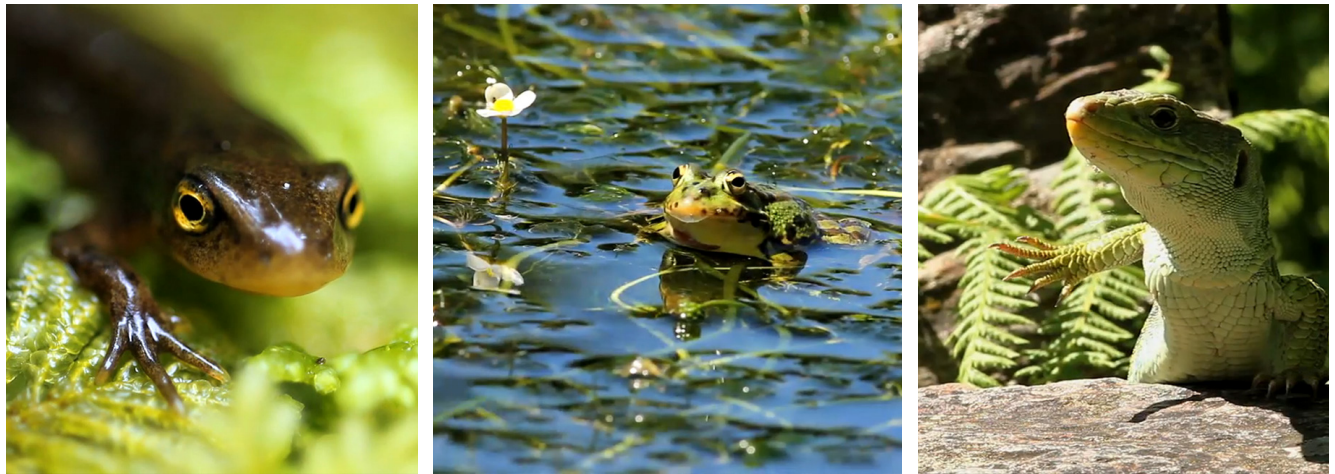
Relatively to that specific quality of aquatic life, there are two main zones to distinguish: the upper portion of the river, with good levels of water quality, providing the maintenance of aquatic biological communities with similar characteristics to a pristine state, and the region Lower Mondego, with accentuated deterioration of water quality.

Regarding the condition of the vegetation riverine, it can be seen that in only about one third of the total length of the river it can be considered very well preserved, i.e. having on both sides a well-developed cover plant, being present there arboreal and shrub strata.

As is common in this type of environments, between the major factors of disturbance, record the degradation and destruction of aquatic and terrestrial ecosystems, associated to urban and industrial development, agricultural development, to barrages construction and illegal sand extraction, and also some playful recreational activities. Also forest activities, fires, invasion of exotic species, hunting and fishing can be considered harmful, although they are considerably regulated.

In the section of the Lower Mondego arise important poplars forests, elms and willows, wick the most iconic is undoubtedly the Choupal National Forest on the outskirts of Coimbra. Here nests the largest colony of urban black kite (*Milvus migrans*) in Europe, with about 70 nests counted.

There are several ornithological interest locals, as the aforementioned Murraceira Island and at the estuary is common to observe species such as the mallard (*Anas platyrhynchos*), the White Stork (*Ciconia ciconia*), Common Flamingo (*Phoenicopterus roseus*), Taylor (*Recurvirostra avosetta*), the silver-gull (*Larus argentatus*), the stilt (*Himantopus himantopus*) and tern-dwarf (*Sterna albifrons*).



Because of its ecological importance as a wetland nesting and / or numerous species of waterfowl feeding, the Mondego Estuary was classified as a site of the Ramsar Convention, a habitat of international importance, not only for these birds species, but also for the migratory fish species existence. Some of these have particular importance from the standpoint of conservation and commercial, including shad (*Alosa alosa*), the shad (*Alosa fallax*), lamprey (*Petromyzon marinus*), and trout (*Salmo trutta fario*). The construction of dams system along the river became, despite efforts to mitigate, an aggravated

barrier to the passage of these migratory species. In the downstream area of the Coimbra's Dam one finds exclusively species able to survive in a potentially saline environment.

At Serra da Estrela is found the rarest waterline Blackbird (*Cinclus Cinclus*) among many other common birds, but there are several other important species, particularly amphibians, some of which are rare and endogenous

Mondego is a lesson of biodiversity of which the population is gaining consciousness over the last few years. The dissemination and pedagogy of its complexity and unique beauty should be targeted awareness programs and environmental exploration in the coming years. Today, you can only watch from a number of isolated initiatives of voluntary nature, that we can highlight the creation of Heritage Mondego Park that clearly intends to redefine an area much larger than that which appears classified and protected by the protection officer Institute for Nature Conservation and Forestry. Also the definition of the Pathways in Nature of Coimbra, under the supervision of the local Town Hall, presents an effort to acknowledge and patrimonial recognition of Mondego, in parallel with other environmental and ecological values of the region.

### Regional administrative boarder

After passing the municipality of Fornos de Algodres, the river acts as the border between portuguese districts of Viseu (north), and of Guarda and Coimbra (south), also dividing the later before its mouth on the Atlantic. It traces the limit between the municipality of Mangualde, Nelas, Carregar do Sal, Santa Comba Dão and Mortágua, in its north bank, and Gouveia, Seia, Oliveira do Hospital, Tábua, Penacova e Vila Nova de Poiares, on the south bank, just before crossing Coimbra, Montemor-o-Velho and Figueira da Foz.



## Hydrographic basin and floods

The Mondego drains a very wide region – its basin is the second in area of all the exclusively Portuguese rivers, covering a total area of 6645 km<sup>2</sup>–, excavating the valleys between the consecutive strands of mountains, in grounds of very significant rainfall. To this picture one should add the important of all major tributaries that, despite smaller, fed by the waters of mountain torrents and post-winter defrost. This pattern characterizes the randomness of the stream, difficult to control, caused by the narrowness of the upper Mondego basin, accelerating and rushing violently its waters, through the deep valleys of its middle course.

This hydrographic basin records an annual average rainfall of 1233 mm and an annual average flow of 108.3 m<sup>3</sup>/s. The waters reach the banks of Coimbra very quickly, or even the alluvial plains of the lower Mondego, where the river left the scars of its inopportune and tumultuous passages. Some floods are historic, as they spread terror and caos, beyond the misery caused by the loss of cattle and harvests.

The main cause of floods is the intensive rainfall, associated with the dimension of the hydrographic basin. On the Mondego they are relatively quick, with gaps of just a few hours between the beginning and the pic of the floods, being particularly dangerous due to the sudden increase of the level of the flow. The floods of the Mondego are recorded at least since the fourteenth century, as they altered the life in the important city of Coimbra. It was possible to record the most important dates, namely those of 1331, 1788, 1821, 1842, 1852, 1860, 1872, 1900, 1915, 1962, 1969, 1979, 2001 and, yet without serious consequences, 2012-13.



The flood flows in Coimbra were in the order of 2500 m<sup>3</sup>/s, being reduced to 1,200 m<sup>3</sup> / s by means of the hydraulic system of Agueira and Raiva, referred to below. At the mouth, today, is set a flow rate of about 3000 m<sup>3</sup>/s.

### **Navigation and bridges**

The available data allow us to assume that there was an evolution of navigability in the Mondego since Phoenician occupation. Maybe during the Roman occupation the seagoing vessels were still around, but the progressive silting reduced the entire navigation, especially to upstream from the town, requiring smaller boats. Later, the mountain barges (so called *barcas serranas*) become the privileged means of transport in the contact between the interior and the coast. They navigate from the Atlantic Ocean to Coimbra and, upstream, smaller boats navigate even up till Penacova. This navigation served especially for women (laundresses of mondego), from Penacova and other places, came to Coimbra seek dirty clothes, which then they returned washed and ironed; they served also for men in order to take firewood to the coast and bring fish and salt to the interior.

In the 17th century the estuary of Mondego only exist downstream Montemor-o-Velho, up to about 20 km upstream of the actual mouth. The progressive silting of the riverbed increased the difficulty of navigation in the Mondego, leading to its almost total disappearance during the 50's of the twentieth century. It is estimated that over the past six hundred years the riverbed will have risen in its final section, about an inch per year, that is, a meter in each century.

This process resulted, to the city of Coimbra, in a set of successive interventions due the importance of the river crossing, and due to the fact the Santa Clara bridge was the main link between the South and the North of the country – or in more accurate analysis in the successive bridges that have existed in actual localization of Santa Clara bridge. Is very well know and documented the progressive rise in the level of the boards, which have been at least six meters high, since the registration of the bridge built - possibly just repaired, on the structure of a pre-existing old Roman bridge -, by d. Afonso Henriques, the first Portuguese King, in 1132 (Alarcão, p. 18) recognizing its importance as a link between the North and South of the new Kingdom. A toll Tower closed the bridge on the far side of the city.

The centuries that followed were of constant struggle against the increase in the level of the waters and the silting up of the river. In such a way that, in 1513, by order of King Manuel, a new bridge was built on caissons of the first bridge, about 5 meters higher (Alarcão, p. 24 and p. 45). Also a new tower would be built on the side of Coimbra (on the right riverbank of Mondego). At the end of 16th century the “O” of the bridge has been established, a kind of small roundabout, on the opposite side. The sophisticated present bridge “Ponte de Santa Clara” project of Eng. Edgar Cardoso, dates from 1954.

All other bridges, upstream and downstream of Santa Clara bridge, in the immediate vicinity of the city, maintained a pedestrian and an ephemeral nature, being rebuilt in each year after the floods that constantly destroyed them.

Other, more recent, are the dam-bridge, from the early 80’s (downstream) and the bridge Queen Santa Isabel, from 2004 (upstream), both predominantly for road usages. There is also the beautiful pedestrian bridge Pedro e Inês, from 2006, project engineers Adão da Fonseca and Cecil Balmond, linking both sides of the Green Park. The railway bridge near Choupal, has existed since the late 19th century.

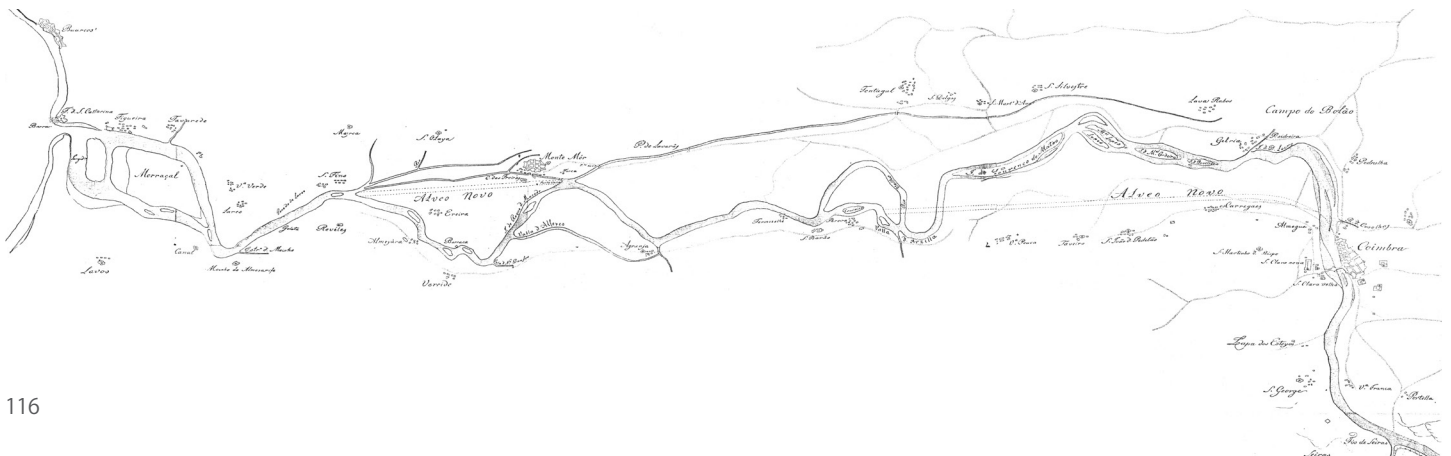
The successive bridges and urban margins reflected over the centuries the rising Riverbed, responding to siltation and looking for protection for the assaults, increasingly worrying, of Mondego waters.



## The lower Mondego regulation projects

The silting up of the river between Coimbra and the sea was a reality from the late 13th century, derived from the deforestation of the slopes at the amount, for the purposes of agricultural livelihoods after the conquest of nationality. Coimbra ancient convents of Santa Ana, St. Domingos, St. Francisco and Santa Clara-a-Velha, were affected by the rising waters of the River, of which only the last one remains, whose ruins can be visited by means of a modern interpretive center. Several Kings bothered with defenses against flooding of the River, particularly in the city of Coimbra, since d. Manuel to Philip III.

In 1684, D. Pedro II has asked the Rector of the University to carry out a plumbing plan of the lower Mondego. Apparently the magnificent plant performed by engineers Manuel Ramos Mexia da Silva and Manuel de Azevedo Fortes, in 1703, which shows the River from Coimbra to Figueira da Foz, is a consequence of this initiative. It is proposed the opening of two channels in a straight line ("new alveo") in order to control and regulate the riverbed. This proposal would be taken up at the end of the century by father Estevão Cabral, in charge to carry out the new plan. On this occasion it was possible to finish the work, especially in the setting of a new straight section between the "quebrada grande" (immediately downstream of Coimbra) and Pereira do Campo, whose works, started in 1791, but were interrupted by the French invasions. From 1781 until 1807 the situation of Mondego fields greatly improved after the opening of a new riverbed. But the situation was getting worse, due to the silting up of the River, arriving to the twentieth century in an unsustainable situation. It was then prepared the General Plan of Hydraulic Harnessing of the Mondego Basin, for intervention in the sixties of the 20th century, which was implemented mainly since the following decade. The Choupal forest, which consolidates the new riverbed, dates from the late 1860's.





## **Management of hydraulic uses**

The Mondego hydrographic basin presents a huge variety of uses of water, which are very important to the economic development of the region, in particular, agriculture, industry, energy production and the public water supply. Due this multiplicity of usages, the implementation of a model of integrated water resources management presented has a crucial task. So it was clear that a global legal and institutional framework must be created and a managing body of the Mondego hydraulic uses was necessary.

## **Irrigation and hydroelectric development**

In the Mondego hydrographic basin are located numerous dams. The total storage capacity of reservoirs located in the basin is approximately 540 hm<sup>3</sup>. This basin is therefore one that has, in Portugal, the greater use of water resources, especially in the hydroelectric and agricultural components. Highlights particularly the Dam system Aguieira /Raiva/Fronhas, completed in 1979, with an installed capacity of 110 MW and an annual average production of 360 GW/h, which regulates the volumes of water for public supply of numerous municipalities and for agricultural irrigation, in the lower Mondego hydrographic usages.

In fact, the 'General Plan of Hydraulic Harnessing of the Mondego Basin' was presented in 1962, having started the first phase of realization about ten years later. As a whole, the work contemplated two large dams – Aguieira and Raiva - and two minors – Fronhas and Açude, the last one in Coimbra, completed in 1981 - and new alluvial riverbeds, 7.7 miles of levees for protection and defense, and irrigation channels. Made the dredging of approximately 16 hm<sup>3</sup> and finishes with a volume of 0.5 hm<sup>3</sup>. This project is still a complex part, landslide prevention and optimization of enterprise farm, associating the hydroelectric development and the redesign and optimization of the entire model of exploring and exploiting agricultural development.

Therefore, the Mondego runs currently on an artificial channel from Coimbra to Figueira da Foz, where it flows into the Atlantic, serving its estuary of port and shelter for trade-related activities, fishing, salt and fish farms, to tourism and nautical recreation, already referred.

The work of control and regulation of the Mondego waters saw his last stage recently finished, just



downtown Riverside.

However, it was the change in the image of the city that proved to be more significant, since the alternation between the sandbank where it ran a slender trickle – known as Basófiás – and the occasional flood of violent winter or spring, was away. The city now rests next to the Lake, or the water mirror, where are reflected the hills, now built on both banks of the Mondego. Has also been possible to retrieve historically relevant archaeological areas, such as the fence of the monastery of Santa Clara-Velha, were flooded by the River, and that the city was obliged to forget for centuries. In coastal spaces have been recently installed new public programs and various urban facilities. In fact, many major investments have been made on the banks, and even on the old riverbed - as had happened before with the University Sports Centre, in the late 50s. This can be seen particularly in the area upstream of the urban center, but there are still many remaining areas that occupy a significant part of the urban margins, especially those located



downstream of the bridge of Santa Clara, in the section that precedes the Açude Bridge, precisely where the ancient wall was on landfills which narrowed the riverbed and broadened the area of urban front. This section corresponds to the traditional position of the city, on the right bank, near the classic River crossing, since the Foundation of nationality and, probably, since the own Romanization. The construction of coastal protection walls, first, enhanced by installing, on them, the lines of rail and rail screening platforms, and even the industrial pressure, between the end of the 19th century and the first decades of the 20th century, a kind of urban occupations that completely lost touch with ordinary city life of river front. The voids we can see

in the riverbanks are now a result of obsolescence of all these buildings and infrastructure, today abandoned or unnecessary, and underused, that only new urban regeneration processes can remedy.

The old historical imagery of Basófiás without water, and his urban river beaches, that year after year occupied the riverbed during the summer, for pleasure and delight of the working classes and students - who have made their sport, recreation and leisure - are now old memories and photographic records. Paradoxically, the same also happens with the Atlantic Beach town of Figueira da Foz that was by tradition, at the time, the seaside resort which served the Coimbra bourgeois classes. From that beach also now remain only old memories, under an immense sand field that the works of port regulation extended to the vastness, with a natural and progressive desertification of the beautiful old Praia da Claridade.

The urban water mirror reflects today, better than ever, the Hill of the old Aeminium and the University Tower, with the same Munda water once meet the city , and that only the torrents of winter temporarily muddy.

### The shapes of History evoked by art

““[...] Coimbra has always been the land of poets and artists, masters of Art for starters and devotees.” [CORREIA, 1937]

Since Roman times the city of Aeminium has stood at a level above the river Mondego. It protrudes in a succession of platforms into the west. From this period the cryptoportico remains, which served as the basis for the forum. Some centuries later, Sé-Velha (the Old Cathedral) is partially excavated into the hillside and projected on the slope. These platforms gain a reciprocity on the opposite side, with monasteries to further introduce a linearity that underlines the hill, and the course of the Mondego. Likewise, the houses of Coimbra develop in concentric rings around the Paço das Escolas (Palace of Schools). It is the dialogue between these platforms, the flow of the river and the bridges that visually mediate the two sides, which will



fix the image of Coimbra during several centuries.

Suddenly the bridges are cut. The River hides from the Lower Town, locked between the hill and large industrial buildings, which break the scale of the medieval city, proliferating on the riparian banks where a heavy rail system runs. With this connection violated, the platforms of the emblematic buildings are hidden, and others reused for the installation of industrial plants, as the case of the Convent of St. Francisco, on the western edge. Although the historic core of the city has remained largely intact, surrounding growth interrupted the direct relationship between the City and River, between the East and West margins.

Our ambition now meet the arduous task of "rebuilding the bridges", to return a balance between the two hills, to restore the flow of the River. This is a tender reading of the city as a succession of levels grouped around a structural continuity. A game of linkages between the riverbanks. There have been works pointing to this sense, such as the Congress Centre, under construction in the old ruin of the Convent of St. Francisco. Also the Mondego Green Park, which has redoubled importance: by intervening on both sides of the margin approaches, linking physically and visually; by extension, reinforcing the linear motion of the River; it defines a position - such as the Parque Manuel Braga had done in earlier times - And acts as a stage for new artistic interventions, such as the Portugal Pavilion, testimony to much improved architectural production. About the old Praça da Portagem (Entrance Plaza), near the Santa Clara Bridge, the Memorial to Miguel Torga makes a synthesis between architecture, sculpture and literature. Extending out over the River, this work is associated with the idea of a "visual bridge" that physically ties up, loosens, parts. This is the same concept on which we founded the exhibition "Flying River," which gathers together artistic production by various authors, embracing the idea of a natural element in this context, while being a starting point for other travels.



## Cultural and artistic imaginaries | Poetry and fado of Coimbra

The Mondego is not just the longest river in Portugal. It has a mythic dimension that flows through the five continents where the Portuguese language is spoken.

In this mythic dimension, which pervades Lusitanian culture, the Mondego decided to be Portuguese. Born in the center of the country, at the highest point of mainland Portugal. Flowing at high speed towards Spain, to suddenly reverse course and flow towards the Atlantic. Crossing the country from the border to the sea, it flows by Coimbra, where it earns a soul that makes it much bigger than its physical dimension. Although not the greatest of rivers flowing in Portugal, the Mondego is by far the river most sung about and romanticized by Portuguese poets, writers and musicians. This is due to the fact that the “city of the Mondego” was, for centuries, the only Portuguese-language university, which formed elites who, in its name and in spaces of its margins, provided, through various cultural events, tributes to the city that welcomed them.

In the voice of Zeca Afonso, in the guitar of Carlos Paredes, in the verses of Camões, and in the eyes of Torga, the Mondego is the soul of the Portuguese language.



Doces águas e claras do Mondego,  
doce repouso de minha lembrança,  
onde a comprida e pérfida esperança  
longo tempo após si me trouxe cego.

*Sweet, clear waters of the Mondego, sweet, kind,  
and restful river of my memories,  
where once misleading hopes whirled in the breeze,  
misguiding me, and leaving me blind.*

de vós me aparto; mas, porém, não nego  
que inda a memória longa, que me alcança,  
me não deixa de vós fazer mudança;  
mas quanto mais me alongo, mais me achego.

*And now, I've gone away, sweet distant stream,  
But, still, your memory overtakes me yet,  
and never lets me change, or ever forget:  
that the further away I am, the closer I seem.*

Bem pudera Fortuna este instrumento  
d' alma levar por terra nova e estranha,  
oferecido ao mar remoto e vento;

*Yes, the Fates have caused my soul to disappear  
into remote and distant lands to roam  
within these seas and winds, both strange and new,*

mas alma, que de cá vos acompanha,  
nas asas do ligeiro pensamento,  
para vós, águas, voa, e em vós se banha.

*and yet, my soul, thinking of you, even here,  
flies upon the wings of my sweet dreams of home  
into your lovely waters and bathes in you.*

## Bibliography

Alarcão, Jorge de (2012), *As Pontes de Coimbra que se afogaram no rio*, Coimbra, Ordem dos Engenheiros

Almeida, Elisa Manuela Domingues (2006), *Coimbra e o Rio Mondego*, in *Evolução do espaço físico de Coimbra* (catálogo da exposição), Coimbra, CMC

Cabral, Estevão (1991), *Memória sobre os danos do Mondego no Campo de Coimbra, e seu remédio*, in *Memórias Económicas da Academia Real das Sciencias de Lisboa (1791)*, Lisboa, Banco de Portugal, tomo III, p.141-165

Coelho, Maria Helena da Cruz (1983), *O Baixo Mondego nos finais da Idade Média*, Coimbra, FLUC, 2 vols

Correia, Vergílio (1937), *Coimbra Cidade de Arte e Artistas*, in *Humanidade*, Coimbra, Dezembro de 1937

David, Carlos; Rabadão, Célia; Pereira, Maria Filomena Santos; Simoes, Regina (1986); *O Porto da Figueira da Foz. Ontem, Hoje, Amanhã*, Figueira da Foz, Biblioteca Municipal

Fortes, Mário (1929), *O Aproveitamento Geral da Bacia do Rio Mondêgo, pelo sistema confederativo sindical hidrográfico*, Coimbra, Portugália

Jorge, Filipe; Bandeirinha, José António (2003), *Coimbra vista do céu*, Lisboa, Argumentum

Lencastre, Armando (2004), *Hidráulica Fluvial e Agrícola – Memórias Técnicas*, vol.III, Lisboa, LNEC

Loureiro, Adolfo (1874), *Memoria sobre o Mondego e barra da Figueira*, *Revista de Obras Públicas e Minas*, ano V, tomo V





**Loureiro, Adolfo** (1905), *Porto da Figueira da Foz*, Lisboa, Imprensa Nacional

**Martins, Afonso Nuno** (2011), *Projecto Territorial do Parque Patrimonial do Mondego – revisitações da paisagem ribeirinha*, Lisboa, FAUTL (dissertação de mestrado)

**Mertins, Alfredo Fernandes** (1940), *O esforço do homem na bacia do Mondego*, Coimbra, FLUC (tese de licenciatura)

**Nunes, Mário** (1990), *Coimbra, imagens do passado 1940-1969*, Coimbra, Minerva

**Quintela, António de Carvalho** (1986), *O Mondego na hidráulica fluvial portuguesa até ao século XX*, in *História e Desenvolvimento da Ciência em Portugal*, Lisboa, Academia das Ciências de Lisboa, II vol., p.1025-1040

**Quintela, António de Carvalho** (2006), *A utilização e o domínio da água na bacia hidrográfica do Mondego: Problemas e soluções ao longo do tempo*, Lisboa, CEHIDRO / Instituto Superior Técnico

**Sanchez, Rui** (1996), *O problema secular do Mondego e a sua resolução*, Lisboa, LNEC

**Vandelli, Domingos** (1991), *Memória sobre o encanamento do Rio Mondego*, in *Memórias Económicas da Academia Real das Ciências de Lisboa (1791)*, Lisboa, Banco de Portugal, tomo III, p.13-19

**Veloso, A. Santos** (1989), *A génese do PIDR do Baixo Mondego*, in *Sociedade e Território – Revista de estudos urbanos e regionais*, nº9, Porto, p.74-82





Education and Culture DG

Culture Programme



euro 33,00

