Atti delle "Settimane di Studi" e altri Convegni 49

PRESIDENTE DELLA FONDAZIONE: Giammarco Piacenti Segretario generale: Giampiero Nigro

Comitato scientifico

Presidente: Erik Aerts

Vicepresidenti: Carlo Marco Belfanti, Laurence Fontaine

Direttore scientifico: Giampiero Nigro

Giunta esecutiva:

Erik Aerts, Carlo Marco Belfanti, Hilario Casado Alonso, Laurence Fontaine, Sergej Pavlovič Karpov, Olga Katsiardi-Hering, Maryanne Kowaleski, Paolo Malanima, Giampiero Nigro, Michael North, Luciano Palermo, Gaetano Sabatini

Altri membri del Comitato scientifico:

Cátia Antunes, Philippe Bernardi, Markus A. Denzel, Giulio Fenicia, Gerhard Fouquet, Maria Fusaro, Darius Kołodziejczyk, Carlos Laliena Corbera, Germano Maifreda, Luca Molà, Pellegrino Gerardo Nicolosi, Erol Özvar, Giuseppe Petralia, Paola Pierucci, Renzo Sabbatini, Simon Teuscher, Diana Toccafondi, Michael Toch

Comitato d'Onore

Maurice Aymard, Michel Balard, Wim Blockmans, Giorgio Borelli, Michele Cassandro, Marco Cattini, Giovanni Cherubini, Murat Çizakça, Philippe Contamine, Mario Del Treppo, Antonio Di Vittorio, Arnold Esch, Luciana Frangioni, Richard Goldtwhaite, Alberto Grohmann, Alberto Guenzi, Paulino Iradiel Murugarren, Miguel Ángel Ladero Quesada, Elio Lodolini, Adam Manikowski, Paola Massa, Anthony Molho, Giovanni Muto, Hans Pohl, Christopher Smout, Henryk Samsonowicz, Jean-Pierre Sosson, Rolf Sprandel, Hermann van der Wee, Valentín Vázquez de Prada, Immanuel Wallerstein, Giovanni Zalin

Fondazione Istituto Internazionale di Storia Economica "F. Datini" Prato

GESTIONE DELL'ACQUA IN EUROPA (XII-XVIII SECC.)

WATER MANAGEMENT IN EUROPE (12TH-18TH CENTURIES)

Selezione di ricerche

Selection of essays

Firenze University Press 2018

Gestione dell'acqua in europa (XII-XVIII Secc.) = Water Management in Europe (12th-18th centuries) : selezione di ricerche = Selection of essays. – Firenze : Firenze University Press, 2018. (Atti delle "Settimane di Studi" e altri Convegni, 49)

http://digital.casalini.it/9788864537009

ISBN 978-88-6453-699-6 (print) ISBN 978-88-6453-700-9 (online)

La Settimana di Studi è stata realizzata con il contributo di: Ministero dei beni e delle attività culturali e del turismo

Peer Review Process

All publications are submitted to an external refereeing process under the responsibility of the FUP Editorial Board and the Scientific Committees of the individual series. The works published in the FUP catalogue are evaluated and approved by the Editorial Board of the publishing house. For a more detailed description of the refereeing process we refer to the official documents published on the website and in the online catalogue of the FUP (www.fupress.com).

Firenze University Press Editorial Board

A. Dolfi (Editor-in-Chief), M. Boddi, A. Bucelli, R. Casalbuoni, M. Garzaniti, M.C. Grisolia, P. Guarnieri, R. Lanfredini, A. Lenzi, P. Lo Nostro, G. Mari, A. Mariani, P.M. Mariano, S. Marinai, R. Minuti, P. Nanni, G. Nigro, A. Perulli, M.C. Torricelli.

La Fondazione Datini si dichiara fin d'ora disponibile ad assolvere i suoi obblighi per l'utilizzo delle immagini contenute nel volume nei confronti di eventuali aventi diritto.

This book is printed on acid-free paper

© 2018 Firenze University Press Università degli Studi di Firenze Firenze University Press via Cittadella, 7, 50144 Firenze, Italy www.fupress.com *Printed in Italy* I testi pubblicati in questa collana raccolgono i risultati di ricerche originali attivate dalla Fondazione Istituto Internazionale di Storia Economica "F. Datini", sulla base di un progetto varato dai suoi organi scientifici. Gli autori vengono selezionati a seguito di una Call for papers che indica gli obiettivi scientifici del progetto; la selezione è effettuata sulla base di proposte circostanziate contenenti indicazioni sulle questioni storiografiche che si intende affrontare, l'area e il periodo storico preso in considerazione e la tipologia delle fonti da utilizzare. La Giunta del Comitato scientifico, eventualmente integrata da specialisti, analizza le proposte e seleziona quelle ritenute più valide e coerenti con il progetto generale di ricerca. La commissione può anche decidere, ove lo ritenga opportuno, di effettuare inviti diretti a studiosi che si siano distinti per la qualità della loro produzione scientifica sul tema.

I testi risultanti dalle ricerche vengono presentati e discussi in occasione della Settimana di Studi. Nel mese precedente al suo svolgimento, essi vengono messi a disposizione dei partecipanti, per consentire il necessario approfondimento della discussione. A seguito delle osservazioni e del dibattito svolto durante il convegno, gli autori inviano i loro testi definitivi. Tutti i testi vengono sottoposti a duplice peer review anonimo. Questo volume raccoglie solo quelli che hanno registrato un giudizio positivo.

The works published in this series represent the collected original research works initiated by the "F. Datini" International Institute of Economic History (Fondazione Istituto Internazionale di Storia Economica "F. Datini"), based on a project launched by its scientific bodies. The authors are chosen following a Call for Papers indicating the scientific objectives of the project; the selection is performed on the basis of detailed proposals containing indications regarding the researched economic history topics, the area and historical period considered, as well as the sources used. The Scientific Committee analyzes the proposals, choosing those considered the most valid and coherent with the general research project. The Committee may decide, if it deems adequate, to invite individual scholars who have distinguished themselves for the quality of their scientific work on the topic. The works resulting from research are presented and discussed during the Study Week. During the month preceding the Study Week, the works are made available to the participants to ensure a more detailed discussion. Following the comments and the debate held during the conference, the authors send their final texts, which are submitted to two anonymous peer reviewers. This book only contains the essays recording a positive judgment.

INDICE

SALVATORE CIRIACONO, Per una storia dell'acqua "à part entière"pag.	1
GESTIONE DELL'ACQUA IN SITUAZIONI NORMALI Water management in normal situations	
WATER MERIOLATIN' IN NORMAL STORTONS	
MICHELE CAMPOPIANO, Gestione ordinaria delle acque e rischi idrogeologici.	
L'amministrazione delle acque nella Pianura Padana tra esigenze energetiche,	
trasporti, irrigazione e rischi di inondazione (secoli XII-XV)pag.	25
JULIÁN CLEMENTE RAMOS, EMILIO MARTÍN GUTIÉRREZ, I paesaggi d'acqua e le loro	
utilizzazioni nella Spagna sudoccidentale tra il tredicesimo e il sedicesimo secolo. »	41
PIET VAN CRUYNINGEN, Water Management and Agricultural Development	
in the Coastal Areas of the Low Countries, c. 1200 – c. 1800 »	63
URSZULA SOWINA, Water Management in Polish Towns (13th-16th centuries) »	81
DIDIER BOISSEUIL, Gestione delle acque termali alla fine del Medioevo in Italia	
e nel bacino del Mediterraneo occidentale»	101
MARÍA ISABEL DEL VAL VALDIVIESO, The Role of Water in the Urban Development	
of Lower-Medieval Castile»	117
ANTONIO MALPICA CUELLO, Water Management in the Kingdom of Granada	
in the Middle Ages»	135
MATTEO DI TULLIO, CLAUDIO LORENZINI, La ricerca della sostenibilità.	
Economia, acqua, risorse e conflitti nell'Italia Settentrionale (secc. XV-XVIII) »	165
GAETANO SABATINI, ARTURO GALLIA, L'acqua dell'Urbe. Costi, modalità di distribuzi	one,
diritti di accesso e forme dell'uso dell'acqua a Roma tra XVI e XVII secolo»	187
MAURIZIO ROMANO, La gestione delle acque nei possedimenti agricoli e urbani	
di una grande famiglia aristocratica milanese e lombarda in ascesa: i Visconti di Modro	ne
(secc. XV-XVI)»	203
GIUSEPPINA C. ROMBY, MARIA ANTONIETTA ROVIDA, Fruizione privata di acque	
pubbliche: crescita urbana e qualificazione dell'abitare nelle città della Toscana	
granducale (secc. XVI-XVIII)»	227
ROMINA N. TSAKIRI, Cisterne, pozzi, fontane, mulini ed altre opere idrauliche:	
l'acqua come potenza movente per le città di dominio veneto. Creta ed Isole Ionie	
(secoli XVI-XVIII)»	279
DMITRY KHITROV, DANIIL KOZLOV, Wetlands of Central Russia: Environmental	
Factors of the Agrarian Development, XVII-XVIII centuries»	305
ALEXEI KRAIKOVSKI, MARGARITA DADYKINA, EKATERINA KALEMENEVA, Water	
Management in Russian Monasteries, 16th-18th cc»	319
DARIUSZ BRYKAŁA, Reconstruction of Disposable Water Resources Stored in Mill	
Ponds in Poland in the Late 18th Century»	337

I DISASTRI NATURALI DEALING WITH NATURAL DISASTERS

GUIDO ALFANI, The Impact of Floods and Extreme Rain Events in Northern	
Italy, ca. 1300-1800pag.	355
TIM SOENS, Flood Disasters and Agrarian Capitalism in the North Sea Area:	
Five Centuries of Interwoven History (1250-1800) »	369
MILJA VAN TIELHOF, After the Flood. Mobilising Money in Order to Limit Economic L	OSS
(the Netherlands, Sixteenth-Eighteenth Centuries»	393
JOHN EMRYS MORGAN, Funding and Organising Flood Defence in Eastern England,	
c.1570-1700»	413
MASSIMO GALTAROSSA, Venezia e le "culture del disastro"»	433
LUCA MOCARELLI, MANUEL VAQUERO PIÑEIRO, Il "pubblico" di fronte al disordine	
idraulico nel secolo dei Lumi tra vecchi problemi e nuove risposte: Lombardia austriaca	
e Stato della Chiesa»	453
TAVOLA ROTONDA	

ROUND TABLE

ERIK AERTS	oag.	475
RICHARD HOFFMANN	»	481
RICHARD JONES	»	487
GUIDO ALFANI	»	493
SALVATORE CIRIACONO	»	499
Abstracts	»	503

M^a Isabel del Val Valdivieso

The Role of Water in the Urban Development of Lower-Medieval Castile¹

On other occasions I have dealt with the link between Castilian cities and water,² which is why, over the next few pages, although I will return to the same topic, I will do so from a different perspective. My intention now is to explore how urban development influenced the way problems related with water were addressed at the end of the Middle Ages in Castile. I will present the topic in a general manner, offering just a few examples so as to favour an overall vision of the question.

At the turn of the XV century, Castilian cities had already achieved substantial success in terms of their economic development, importance within the kingdom and vis-à-vis their role as centres of influence on the surrounding areas. It is true that said centres varied enormously in size, ranging from what might be considered large towns at the scale of the kingdom, such as Seville, Burgos, Valladolid or Medina del Campo, down to small towns like Bilbao, Aranda de Duero, Madrid, Cuellar or Guadalajara. However, in all the cases in hand, local government in the shape of the urban councils, needed to address the fresh demands which emerged as a consequence of the expansion of the towns they governed.

Urban society, particularly the nobility and local elites, faced new demands as a result of the new times. Initially, satisfying the needs related to water and hydraulic resources entailed, among other things, the necessity for towns to be established close to where water was available, whether it be a river, a spring or a well offering a sufficient supply and flow, so as to ensure that not only the townsfolk but also the livestock had enough water to survive, and also to guarantee that certain craftsmen could ply their trade. If we look at the XV century, we see how the problem changed. At that time, it was clear that all towns had more or less enough water available, to a greater or lesser extent. However, this was no longer sufficient to satisfy the needs and aspirations of the town and its inhabitants. They now also needed to make use of it symbolically and to improve what we refer to today as "living conditions".

¹ This work has been carried out within the framework of research project HAR2014-52469-C3-P, funded by the Spanish Ministry of Economy and Competiveness (MINECO).

² M^a I. DEL VAL VALDIVIESO, Agua y poder en la Castilla bajomedieval. El papel del agua en el ejercicio del poder concejil a fines de la Edad Media, Valladolid 2003; EADEM, Usos del agua en las ciudades castellanas del siglo XV, in "Cuadernos del CEMyR", 18, 2010, pp 145-166; EADEM, Política urbana y percepción de los recursos hídricos en la Castilla bajomedieval, in "Minius. Revista do Departamento de Historia, Arte e Xeografía", 23, 2015, pp. 65-90.

At that moment, both the town, perceived as a legal entity in itself, as well as those who lived in it, demanded not only material and tangible resources, but also sought other intangible resources. These are those which might be reflected in benefits related to honour, prestige and how a town, family or particular group may be held in esteem in comparison to others. These are elements which seek to project an image that will give the most favourable impression possible, and which will also contribute inwardly towards creating a feeling of collective pride that will enhance internal cohesion and help consolidate the power of the local council and those who control it.

Given this situation, water and all the activities related to it take on a fresh meaning with the two-fold quality which this particular good gives rise to; namely both its positive and negative side, partly because it changes the way in which it is perceived, in the sense of endowing it with greater symbolic value. Water is also expected to benefit the whole community, which explains why the fees and taxes that the use of water entailed were accepted. In sum, it is also because all local government wishes to project a good image of its city, a goal related to which water plays a key role, as shall be seen later.

1. PROVIDING NEW INFRASTRUCTURE

The growth in population, and above all the desire to have good quality and easily accessible water available, explains why in the XV century numerous local councils sought to channel water to central areas and to places where it could help enhance the beauty of the town. In itself, this is nothing new.³ What is new, however, is the increasing number of decisions taken in this regard. Those governing the town came under pressure from two fronts: on the one hand, from the districts and inhabitants who would benefit particularly from having a source of water close to their dwellings, and on the other from both the general desire as well as local council desire to enhance the town's prestige, which entailed the need to look after public facilities, prominent amongst which was ensuring the availability of water in the conditions referred to.

In some places, people stored supplies of rainwater in tanks. In such instances, there tended to be rules governing the capture of water from rooftops, said water being deemed to belong to the owner of the dwelling. Such was the case in Toledo, where the water ran down into the courtyard from the houses where it could be stored in tanks or cisterns and from where it could then be drawn out through an opening in the courtyard. In order to ensure the water was fit to drink, in addition to being waterproof, the tanks were coated with ochre, a product which helped preserve the water. Tanks were cleaned at the end of each summer.⁴ Yet that particular

³ See J.A. BONACHÍA HERNANDO, "Más bonrada que ciudad de mis reinos": la nobleza y el bonor en el imaginario urbano (Burgos en la baja Edad Media, in La ciudad medieval. Aspectos de la vida urbana en la Castilla bajomedieval, J. A. BONACHÍA HERNANDO coord., Valladolid 1996, pp. 169-212.

⁴ R. IZQUIERDO BENITO, *El agua en Toledo en la Edad Media*, in *Agua y sociedad en la Edad Media hispana*, M^a I. DEL VAL VALDIVIESO, J.A. BONACHÍA HERNANDO eds., Granada 2012, pp. 221-240, 224-228.

solution was not very common, and even where its use is documented, it was found to be insufficient, since not all dwellings were equipped with such a facility. Moreover, the water gathered was not felt to be particularly apt for human consumption. As a result, rivers continued to provide water for human consumption, said water being carried to dwellings by the women of the house or by water carriers. The latter worked under the conditions established by the local council, who thus sought to ensure it received the corresponding fee in addition to making sure that residents were provided with a service that offered water in the best possible conditions. In 1488, in Sigüenza, for example, the water was delivered by water carriers, whose pitchers were controlled by the cathedral council, an institution which contemplated levying a fee on the water sold in the town.⁵ On the banks of the Duero, in the town of Zamora, it was the local council who took charge of regulating the work of the water carriers, as tended to be the case in most towns. In this instance, in order to safeguard the quality of the water sold for drinking, the council established where it was to be collected, the size of the pitchers and that the latter had to be covered when the water was to be used for human consumption. These regulations were not only aimed at protecting those purchasing the water and at making sure the council received the fees to be paid by the water carriers but also sought to promote harmony and, particularly, peaceful co-existence in the town. In the words of the ordinance issued in Zamora, the goal was to avoid "much harm to the town and its people", which might otherwise be the case were the water carriers to act differently.6

In addition to purchasing water from water carriers, people also availed themselves of wells or springs located near to or even inside the urban nucleus, even though these supply points did not always offer good quality water. On occasions, there was also the difficulty of the distance to be covered by those who needed to fetch water for use at home or for their crafts and trades. As a result, when the supply of water was too far away or when this was known to be of poor quality, it became increasingly common to look for other better quality water, and an effort was made to provide supply points in central and easily accessible areas for the townsfolk, even if this involved undertaking complicated and costly public works. This at times meant initially having the water brought inside the walled area, as occurred in Sigüenza where major piping work was undertaken to channel the water to a fountain inside the wall. Yet this was not enough, since once this had goal had been accomplished it was necessary to keep the facilities in good condition. Like most towns, this town also contained numerous private wells in homes, and of course in the castle and cathedral, in addition to some springs in the nearby pine forests, although there is no documentary evidence of any work involving water being channelled until the second half of the XV century, a time when many towns were considering undertaking this type of work. In 1474, the cathedral council and the local council took charge of the matter and work commenced. The job was

⁵ P. MARTÍNEZ TABOADA, Urbanismo medieval y renacentista en la provincia de Guadalajara: Siguenza, un ejemplar singular, 2 vols. Madrid 1990 (Complutense University of Madrid), p. 1463.

⁶ M.F. LADERO QUESADA, La ciudad de Zamora en la época de las Reyes Católicos. Economía y gobierno, Zamora 1991, pp. 412-413.

placed in the hands of a Moor, whose work was subsequently supervised by a master builder, probably because it must have been complicated since it even proved necessary to build an aqueduct to bridge a ravine that ran between where the water was and the fountain's final location. The latter stood near one of the gates, the Cañadilla gate, near the cathedral. In 1495, the cathedral council ordered it to be relocated to an area between two of the town's gates, probably to improve access, but also to ensure the quality of the water since la Cañadilla was the area where the dyers worked, which would pose the threat of contamination. In the mid XVI century, plans were made to have it moved to a more visible and accessible place, the town square.⁷

Although we do not know for sure why, the piping and the fountain needed to be repaired years later, probably because the conduits had broken, or at least that is what would appear to have been the case given the payment of ten reales made in 1486 to the "Moor Alcallen" for "making the piping" (a Moor had already been paid in 1474 for doing the same work). Every effort was made to make sure the repair work went smoothly and renowned specialist builders were brought in to ensure the pipes functioned correctly, as can be seen in an agreement undertaken in 1527 in which the cathedral council decided to engage the services of "a renowned master plumber" to deal with the situation as swiftly and as satisfactorily as possible. On a different note, the fountain itself posed certain problems in the relations between the town and cathedral council, as is reflected in the malaise of local residents when, in 1486, the cathedral council appropriated part of the water, and had it piped to the inner part of the cathedral area.⁸

Yet from the standpoint which interests us here, in other words the need to endow the town and its residents with an infrastructure which would lend weight to and enhance its prestige as well as satisfy its needs, the main problem posed by the fountain in Sigüenza is the poor flow, due partly to the loss of water caused by the broken clay piping, but also perhaps because the actual source failed to provide sufficient supply. This meant that as of the late XV and early XVI century (there are still references in 1558 to the lack of water due to the broken fountain and cracked piping) the cathedral council, and also occasionally the local council, sought a solution to the problem by having water channelled from other springs, for which local residents were constantly being burdened with extra taxes like sisas.⁹ The quality of the water was also obviously a concern. As a result, in 1486 the cathedral council banned animals from drinking there and from anything being washed there under penalty of a fine of ten maravedís. A public washing area would later be built, the mention of which appears in the cathedral council records of 1528. This constant concern clearly highlights the importance the fountain held for the local population, both from the material point of view as well as with regard to the prestige which such an infrastructure afforded. Proof of this can be found in the decision of Car-

⁷ P. MARTÍNEZ TABOADA, Urbanismo medieval y renacentista en la provincia de Guadalajara: Sigüenza, cit., pp. 638-639, 641-643, 1468 and 1469.

⁸ Ibid., pp. 1464-1465, 1478, 1482-1483.

⁹ The *sisa* was an extra tax charged on the sale of certain products, particularly food such as meat, wheat, fish and wine.

dinal Pedro González de Mendoza who, in his position as bishop of Sigüenza, and therefore lord of the town, after seeing the poor condition of the fountain, and in order to avoid the "great fatigue and harm" this brought on the townsfolk, ordered it to be repaired in February 1489.¹⁰

Such initiatives involved two aspects; channelling the actual water from a spring to the town centre, and building a supply point that would serve a dual purpose; the first and most obvious reason being to provide easy access to water for those who needed it. In addition, these supply points also sought to adorn the place they were located, ennobling the town and enhancing its image and prestige, which in turn strengthens the position and power of the local government. This can clearly be seen in Burgos, a town endowed with an important fountain which serves the dual purpose of both supplying water and enhancing the beauty of the town. This was none other than the fountain of Santa María, located at the entrance to the cathedral, documented at the end of the XIV century. The fountain of Sarmental also drew water from it as did possibly another two, those of Azogue and Arco de San Martín. A document dated 1462 evidences the existence of another in the cemetery of Santiago, and at the end of the XV century, in 1491, the local council is known to have applied to the king and queen for authorisation to have another built in the Vieja Rúa, claiming it would be for the "good of the republic", ¹¹ again leading us to the emerging need to show off one's importance through constructions that were at the same time both useful and, if possible, beautiful, such as fountains.

This is precisely what Valladolid tried to do in 1494 when commissioning the construction of a system to pipe water from the Marinas spring, just a few kilometres away from the town. The idea was to channel it to a central area and there to build a fountain which would have several stone basins. When master Yuça, the master builder commissioned to undertake the work, failed in his attempt since he was unable to channel it to inside the walls, he was jailed by the local council in 1497 and given a hefty fine in an effort to recover at least part of the 750,000 maravedis the work had cost. The local council's reaction must be understood not only as arising out of a breach of contract and in an attempt to seek redress for the damage caused but also due to the frustration resulting from not having been able to get the water channelled to the fountain that had already been built in the main square. To offset the failure, at least in part, the local council then decided to have a much simpler fountain built together with a wash area¹² at Campo gate, to where Yuça

¹⁰ P. MARTÍNEZ TABOADA, La ciudad de Sigüenza a finales de la Edad Media: Fuentes para el estudio de sus murallas, plazas, infraestructuras y edificios singulares, in Construir la ciudad en la Edad Media, B. ARÍZAGA BOLUMBURU, J.Á. SOLÓRZANO TELECHEA eds., Logroño 2010, pp. 143-154. P. MARTÍNEZ TABOADA, Urbanismo medieval y renacentista en la provincia de Guadalajara: Sigüenza, cit., pp. 1462, 1468-1471, 1473, 1474, 1479-1480,1491, 1493, 1505 and 1508.

¹¹ J. SEBASTIÁN MORENO, *La ciudad medieval como capital regional. Burgos (siglo XV)*, Madrid 2017 (Unpublished doctoral thesis, Autonomous University of Madrid), pp. 764-766.

¹² Building public wash areas was also being considered at the time. Again, this can be viewed in the same way as other water-related infrastructure, namely as favouring the prestige and honour of the town and contributing to improving the living standard of local residents, in this case women, since it was they who took charge of washing, both as professionals and domestically. For information concerning the work of the washer women, see C. SEGURA GRAÍNO, *Los oficios del agua*, in *Vivir del agua en las ciudades medievales*, M^a I. DEL VAL VALDIVIESO coord., Valladolid 2006, pp. 11-24, 15-16.

had managed to pipe the water. The fountain in the square was disassembled and the spare material sold off, since we know that three of the stone basins were bought by individuals and that a fourth was donated to the monastery of Santa Clara de la Villa, whilst in 1499 part of the stone was used in local houses.¹³ The importance attached to this new facility is evident, amongst other details, from the fact that in order to safeguard its proper functioning, it was given over to those who would then ensure the conduit running from the Huerta de las Marinas to el Campo gate was kept in good condition in exchange for certain benefits. Keeping the public wash area and the piping in sound working order meant enjoying use of the vegetable garden, having a water carrier who would sell water from said fountain to the buyer's door at a price of two maravedis per load, and enjoying the income derived from charging one maravedí per person per day for the privilege of washing there. As can be seen, the local council was extremely interested in the new facility since to a certain extent it also ennobled the town, by providing it with something that would favour the work of the women and which evidenced local council concern for the welfare of the townspeople whilst at the same time helping to project a good image. However, that did not mean the council gave up the idea of having water channelled to the inner part of the town, such that in 1499 they decided to try to have the water piped from the fountain at the Gate of el Campo to two fountains that would be built in the vicinity of the market. The justification for the decision is evident: "considering the enormous use and value it would provide to the whole of this town and its townspeople and residents as well as to all the people who come hither from wherever, for the health of all the people and to ennoble the town, having fresh and clear water to drink".14

This latter point also accounts for why during this period such care was taken of public wells, in other words those which any local resident could access in order to acquire such a prized asset as water. The measures might have been taken to guarantee the quality of underground water so as to ensure the supply of drinking water or, more closely linked to the issue in hand, might have related to local council action aimed at repairing and adorning the stone parapet and surrounding area. If we return to the example of Valladolid, we see two different ways of doing things that can also be found in other areas. These are schemes sometimes funded publicly

¹³ F. PINO REBOLLEDO (commentary, transcription and indices), *El primer Libro de Actas del Ayuntamiento de Valladolid. Año 1497*, Valladolid 1990, no. 262, 292, 315-319, 348-349, 422, pp. 106, 117, 124-125, 133-134, 158. F. PINO REBOLLEDO, (transcrip.), R. Mª CALLEJA GAGO, (indices) and F. BARRASA YUSTOS, (prologue), *Libro de Actas del Ayuntamiento de Valladolid. Año 1498*, Valladolid 1992, no. 170, 177, 268, 308, 312, 313, 370, pp. 65, 68-70, 104, 120, 121, 144. F. PINO REBOLLEDO, (transcrip.), R.Mª CALLEJA GAGO, (indices) and S. ARRIBAS GONZÁLEZ (prologue), *Libro de Actas del Ayuntamiento de Valladolid. Año 1499*, Valladolid 1993, no. 22, 169, pp. 22, 79. N. GARCIA TAPIA, *Ingeniería y arquitectura en el Renacimiento español*, Valladolid 1990, pp. 325-328.

¹⁴ "consyderando la grand hutilidad e provecho que viene a toda la república de esta villa e vezinos e moradores de ella e a todas las personas que a ella vienen de fuera parte, para la salud de todas las gentes e para el ennobleçimiento de ella de bever e tener una fuente de agua dulze y clara". F. PINO REBOLLEDO (commentary, transcription and indices), El primer Libro de Actas del Ayuntamiento de Valladolid. Año 1497, cit., no. 78, 87, 104, 114, pp.. 47, 49, 54, 58. F. PINO REBOLLEDO (transcrip.), R.Mª CALLEJA GAGO (indices) and S. ARRIBAS GONZÁLEZ (prologue), Libro de Actas del Ayuntamiento de Valladolid. Año 1499, cit., no. 152, pp. 70-72.

and in other instances financed through private contributions, although in both cases the aim is the same, namely to favour access to water and to enhance the beauty of the supply points by keeping them well maintained. In 1497, the local council took charge of repairing the parapet of one of the wells, the one at la Costanilla. Two years later, in 1499 the local council commissioned two parapets made of lime and pebble for two wells in the town, one near the house of the viscountess of Palacios de Valduerna, and the other in a central square, San Llorente. In this case it was the townsfolk who were forced to foot the bill for the work. In both instances, the local council wanted the work to be well done, although only in the case of the one near the viscountess's house was it expressly stated that it should be "very well done", possibly reflecting the fact that it was the more central and visible areas that received preferential treatment or those located near to where prominent members of the town lived.¹⁵

This latter aspect leads us to the issue of the maintenance of available facilities. In certain instances, this involved seeking the help of specialised workers such as Moorish pipe layers from Seville.¹⁶ In this case, however, little is known, although abundant evidence points to there being many Mudejars (Moors or Muslims who remained in the Christian kingdoms of Iberia after the Reconquest) amongst them, as was common with those involved in carrying out channelling and hydraulic construction work. We have just seen an example of this in Valladolid, where the builder hired for the unsuccessful attempt to channel water was master builder Yuça, a Moor from Guadalajara. Another case was Sepúlveda, where we also see Moors working on the fountain. It is also evident in many other cases, such as Medina del Campo and Madrid. Obviously, there were also renowned master builders amongst the Christian community, some of whom were monks, such as Brother Juan de Escobedo, prior of the monastery of El Parral, who was involved in repairing the aqueduct in Segovia during the reign of the Catholic Monarchs.¹⁷ Other master builders were laymen, as can be seen for instance in Aranda de Duero, a town located on the banks of the river of the same name, and which at the turn of the XVI century still lacked a fountain inside its walls. In addition to other possible causes, this accounts for why the local council, after reaching an agreement with the convent of San Francisco, which also needed water, drew up an ambitious plan aimed at increasing the availability of water for irrigation, channelling the water to the convent and installing a fountain within the confines of the walls. This would enhance the town's prestige whilst also benefitting all the townsfolk who would thus have a supply of water easily and readily available. In order to achieve this, the

¹⁵ F. PINO REBOLLEDO (transcrip.), R.M^a CALLEJA GAGO (indices) and S. ARRIBAS GONZÁLEZ (prologue), *Libro de Actas del Ayuntamiento de Valladolid. Año 1499*, cit., no. 406, pp. 174-175. D. PELAZ FLORES, *El concejo en las obras públicas de la villa de Valladolid a partir de los libros de actas de finales del s. XV*, in *Construir la ciudad en la Edad Media*, B. ARÍZAGA BOLUMBURU, J.Á. SOLÓRZANO TELECHEA eds., Logroño, 2010, pp. 601-619, 613-617.

¹⁶ I. MONTES ROMERO CAMACHO, *El abastecimiento de agua a la Sevilla bajomedieval: los moros cañeros y el acueducto de los Caños de Carmona*, in *Construir la ciudad en la Edad Media*, B. ARÍZAGA BOLUMBURU, J.Á. SOLÓRZANO TELECHEA eds., cit., pp. 55-90, 71-79.

¹⁷ N. GARCÍA TAPIA, *Técnica y poder en Castilla durante los siglos XVI y XVII*, Valladolid 2003, pp. 62-63.

plan was to divert the river Aranzuelo towards Aranda. Apart from the vicissitudes which the affair led to, with the work being scheduled to commence in 1500, and leaving aside the fact that it was finally not built, not due to technical problems, but because of the conflicts it sparked and almost certainly because the local council could not afford the high cost, what is of interest here is that in the early XVI century there were three "master builders for bringing water" in the town whose prestige and skill must have been widely recognised since they were involved in constructing the irrigation canals in relatively nearby areas, in the villages of Roa and Frías.¹⁸

On a different note, it should be pointed out that in places where a great deal of trading took place, and which gave rise to fairs, the interests of the merchants coupled with the new urban mentality entailed further requirements, namely drinking troughs for pack animals. When the fair grew in importance and attracted numerous traders from outside, it became essential to ensure these were provided with a wide range of facilities that would make certain they had a good stay during the fair. This included catering to the needs of their horses.

When the town was located on the banks of a river which provided a regular, abundant and easily accessible supply of water, it proved relatively easy to offer outside merchants the water needed for the animals used for transport. However, if the area did not offer this, the situation became complicated, since visitor numbers at the fair might suffer if merchants were not afforded these facilities. Such was the case at Medina del Campo, a town traversed by a river which lacked a regular flow. It was precisely because the river failed to provide a regular supply of water for animals that the local council was forced to carry out the work required to ensure such a facility was available to a particular group of merchants who regularly attended its fairs, namely the Portuguese. As a result, a drinking trough was built for them on the outskirts of the town.¹⁹

In addition, local councils needed to meet other requirements which involved them carrying out work concerning two other types of infrastructure. Firstly, and whenever possible, it was recommendable to make sure the town had the hydraulic energy required to turn mills and other mechanisms. This was another example of good governance, and provided further evidence of the town's importance. It also responded to the need to ensure that crops could be ground, in other words to guarantee the supply of flour to a growing population, as well as helping industry, particularly textiles by installing fulling mills. In lower-medieval Castile, water was considered a public asset although its use could be privatised. In this regard, it was the task of the local council to ensure the availability of sufficient water to enable local residents to survive and to allow them to engage in trades and crafts which required the use of water, in particular hydraulic energy which could move hydrau-

¹⁸ I. ABAD ÁLVAREZ, J. PERIBÁÑEZ OTERO, *El control social del agua en la villa de Aranda de Duero. El aprovechamiento del río Aranzuelo a principios del siglo XVI*, in Usos sociales del agua en las ciudades hispánicas de la Edad Media, coord. Mª I. DEL VAL VALDIVIESO, Valladolid 2002, pp. 113-156, 123-126 and 140.

¹⁹ M^a I. DEL VAL VALDIVIESO, Mercaderes portugueses en Medina del Campo (siglo XV), in Actas das II Jornadas luso-espanholas de História medieval, Oporto 1987, pp. 591-608, 599. ARCHIVO GENERAL DE SIMANCAS (AGS), RAGISTRO GENERAL DEL SELLO (RGS), 1494, November 3, fol. 12.

lic mechanisms. Good governance involves taking charge of such matters, namely safeguarding the use of water and hydraulic energy to the benefit of the townspeople by satisfying their needs in this regard. In order to accomplish this goal, at times it was necessary either to extend the area over which the local council had jurisdiction or to take control of the rights over water beyond what lay strictly within their domain. This was what the village of Paredes de Nava did in the late XV century when faced with the need to equip itself with mills. They first tried to do so by renting, but when this failed to solve the problem, in the second half of the XV century the local council decided to purchase an area on the banks of the river Carrión, which granted rights over the water, and therefore provided the hydraulic energy required to turn its own mills.²⁰

Secondly, there was a need to safeguard the condition of the bridges and to make sure that on no account would they pose a threat to local residents' safety. Controlling the passage over a river was obviously yet another sign of a town's power in addition to providing a source of income for the local coffers, although it was also almost always a constant source of expense given the recurring need to carry out repairs. Beyond this, however, keeping the bridge in good condition, ensuring that its construction remained solid and, as far as possible attractive, was a further source of pride. This led local councils to take care of a structure that would benefit them in two ways: namely thanks to the possible income it could provide and, particularly, because of the prestige it could afford its owner, in this case the local council who could thus show off both their power and how healthy their finances were, even if this was not necessarily the case, since extra taxes often had to be levied to maintain the bridge.

Yet all of this was by no means an easy task, partly due to the cost of the building work and subsequent maintenance but also because on many occasions bridges were a source of conflict with other towns and villages. Two examples serve to highlight this. As occurred in many other towns, Sigüenza witnessed how the river swept away the bridge in 1512, forcing the cathedral council to order it be repaired, repeating work that had already been carried out in 1506.²¹ The local council in León needed to keep a close watch on its bridges, since they were not only key to ensuring communications, but also a sign of its power. The bridges were in constant need of repair due to the force of the water causing serious damage when the river rose, in addition to the wear and tear resulting from non-stop use.²² In the case of the small town of San Vicente de la Barquera, on the Cantabria coast, the construction of its two bridges in the second half of the XV century provided a good solution for safeguarding links with other areas and avoiding the danger of having to wade across the estuary or cross it by boat when the sea was rough. Yet these wooden bridges not only sparked conflicts with the boatmen who, up until the

²⁰ J.C. MARTÍN CEA, *La política municipal sobre el agua en los concejos de la Cuenca del Duero a finales de la Edad Media*, in Usos sociales del agua, M^a I. DEL VAL VALDIVIESO coord., cit., pp. 43-87, 64-65.

²¹ P. MARTÍNEZ TABOADA, Urbanismo medieval y renacentista en la provincia de Guadalajara: Siguenza, cit., pp. 1514-1515.

²² C. ÁLVAREZ, *La ciudad de León en la Baja Edad Media*, Madrid 1992 (Hullera Vasco-leonesa), pp. 83-89.

bridges were built, ferried people across and thus obtained an income which they had no wish to forfeit, but also meant more expenditure for the local council, who were forced to undertake repeated repair work.²³ Ensuring a good system of communications, particularly with regard to trade, is a further element which enhances a town's prestige within the context of the surrounding district and indeed the kingdom as a whole. This explains why local council interest in bridges led them to become involved in areas outside their domain. Such was the case of Medina del Campo, a large trading town, which took charge of repairing some of the bridges dotted along the route between Burgos and the town. However, this could also be seen in smaller towns and villages, such as San Vicente de la Barquera, whose local council took responsibility for the bridges between the Meseta in the direction of Burgos, such that in 1500 it requested permission to collect a special tax to repair its own two bridges in addition to another located on the above-mentioned route, at Cabezón de la Sal. In the previous year, 1499, a representative from the local council at San Vicente de la Barquera made another request on behalf of the council as well as other towns where the four bridges on the road to Castile were located to have a special charge levied on pack animals using the crossings. This was done in order to have the damaged wooden bridges repaired.²⁴ A further example was in Santander, another coastal town which needed to ensure good communications with the Meseta. This led its local council to take charge of repairing two bridges located along the way.²⁵

2. FIGHTING THE DANGERS OF WATER

The issue of bridges leads us on to the dangers posed by water, and which are of particular concern, shaping the way people think and forcing local government to intervene in certain affairs, one of which was to prevent flooding.

One further concern of Late Middle Age towns was to protect themselves against natural threats.²⁶ It was impossible to do anything about these in many cases, even though attempts were made by resorting to certain religious rites as was the case when faced with major storms or when there was too much or too little rain. Nevertheless, when it came to rivers overflowing, it did prove possible to take preventive measures. The first of these involved keeping the river bed clean in order to prevent stagnant water and possible disease, a task undertaken in the dry season when the water level was running very low and the river flowed less freely. The

²³ F. MARTÍN PÉREZ, *Espacio, poder y sociedad en San Vicente de la Barquera en la Edad Media*, Santander 2017 (Unpublished doctoral thesis, University of Cantabria), p. 179.

²⁴ Ibid., pp. 182 and 192; Document of 1499, pp. 562-564.

²⁵ J.A. SOLÓRZANO TELECHEA, J. AŇÍBARRO RODRÍGUEZ, Infraestructuras e instalaciones portuarias, fluviales e hídricas en las villas del norte peninsular a finales de la Edad Media: Las obras públicas como instrumentos del poder, in Musulmanes y cristianos frente al agua en las ciudades medievales, M^a I. DEL VAL VALDIVIESO Y O. VILLANUEVA ZUBIZARRETA eds., Santander 2008, pp. 275-305, 282.

²⁶ M^a I. DEL VAL VALDIVIESO, Beliefs, Religious Practice and Superstition in Castile in the Late Middle Ages, in Wasser in der Mittelalterlichen Kultur. Gebrauch – Wahrnehmung – Symbolik / Water in Medieval Culture. Uses, perceptions and symbolism, G. HUBER-REBENICH, CH. ROHR, M. STOLZ eds., Berlin 2017, pp. 375-385.

second case involved just the opposite. When water was in abundance, it was essential to make sure it ran freely. To ensure this, the cleaning work just referred to proved useful, although the most important task was to make certain there were no obstacles that might hinder the free flow of the waters in urban areas, particularly near the bridges.

As a result, given the need to ensure that the river bed remained clean and obstacle-free and that the waters could flow freely, local councils also had to take care of the bridges when it was deemed necessary. The pillars of the bridge could be seen as a threat in that they might obstruct the passage of the water if not built well enough, although this was less often the case. What was more common was the need to make sure there were no blockages. Another issue concerned the mistrust with which any dwellings built on or near the bridges was viewed. The lack of space in the town centre could lead to dwellings being built whose supports might stand on the river. It was these supports which, in the eyes of the locals, could obstruct the flow of water when the river rose, and which could thus lead to flooding that might seriously harm the population. As a result, when this was the case, the local councils, seeking the common good over private interests, took measures to have the dwellings removed from the bridge area, arguing that the pillars might prevent the free flow of the waters when they rose. One clear example of this may be found in Medina del Campo, whose local council decided in the early XVI century, to intervene in the town's main bridge, San Miguel Bridge. This was a stone bridge, with thick pillars, on which houses were built whose supports stood on the river bed. Feeling that the condition of the bridge coupled with the houses built on it hindered the flow of the water when the river rose, which in turn led to flooding in the town centre, it was decided to have the houses knocked down and the bridge rebuilt so that the spans could be enlarged to allow the waters to flow freely at all times.27

In order to safeguard the townsfolk and prevent damage in the urban framework, local councils were therefore forced to intervene in such matters, investing the time, effort and financial resources required to avert the danger. When seeking to secure the common good, such action also occasionally involved receiving criticism as a result of having to face up to those whose personal rights were affected. When implementing their water policy, however, local council action might be balanced out by being able to favour the powerful and not just the majority of the townspeople. Yet these are not the only consequences of the new urban demands with regard to managing water resources. Securing good conditions of hygiene and health led local councils to undertake other kinds of action.

A well-looked after and attractive town must be clean and should not have to put up with bad smells or be threatened by contamination from its waters. As a result, local government must deal with such matters so as to fulfil the aspirations of residents as well as their own desire and need to improve the town's image, thus

²⁷ M^a I. DEL VAL VALDIVIESO, Preocupación urbanística e intereses económico-sociales en el ocaso de la Edad Media, in Terres et hommes du Sud. Hommage à Pierre Tucoo-Chala, ed. CH. DESPLAT, Biarritz 1992 (Editorial J and D editions), pp. 369-386, 375-378. A. SÁNCHEZ DEL BARRIO, Historia y evolución urbanística de una villa ferial y mercantil. Medina del Campo entre los siglos XV y XVI, Valladolid 2005 (Unpublished doctoral thesis, University of Valladolid), p. 193.

enhancing its prestige and honour, and making life more pleasant for its inhabitants.

In this regard, two trades required particular control to prevent them from having an adverse effect on the population; dyers and tanners. In both instances, water is contaminated and in the case of the tanneries there is also the offensive smell that pollutes the air, and which on many occasions is thought to be the cause of disease, adding to what is already the bad smell. Precisely for this reason, and in an effort to secure a good image for the town as well as to benefit the majority of its inhabitants, local government in the late Middle Ages took measures to remove such activities from the town centres.

Craftsmen in both industries tended to locate their workshops on the banks of streams or rivers or near to a water supply that could provide them with the water they needed to work. When this was not the case, they built small channels or pipes that would carry the water to the troughs in which they worked. This meant that, as a result of the growth of such industries, the actual appearance of the towns changed in some cases. It also meant that the local councils needed to control such activities, exercising their power to either authorise or not the necessary building works.

When in the late XV century, as a consequence of the growth of towns such facilities ended up occupying areas that were relatively central and very close to dwellings, it became necessary to take measures to have them moved away from such areas. The idea was to move them down river, so that they would not pollute the areas needed by those living near, if possible locating them against the prevailing wind so as to avoid bad smells. Such measures sparked the resistance of those craftsmen who were directly affected, although once again the argument was put forward of defending the common good as opposed to that of just one group. What occurred in Palencia in the late XV century serves to illustrate this. In an effort to ensure the common good as well as to enhance the town's image, the local council not only established regulations concerning where materials could be washed but also the practice and location of any trades and crafts which might pollute. This was why a municipal permit was needed to set up as a dyer. On occasions, craftsmen whose work might cause pollution were forced to swear an oath to the effect that they would not pollute the drinking water, and fines were imposed on those who threw rubbish into areas from where water was drawn for human consumption. In addition, dyers had to set up where they were instructed to do so by the local council, outside the town walls and away from anywhere near the river. Said location was decided upon in the late XV century and meant moving these crafts away from the centre of the town, which led to resistance. In order to convince those who opposed the move, Palencia local council not only offered to give the land on which the businesses could be set up but also provided the necessary facilities they required to ply their trade.²⁸

In Madrid, where as is usual it was the local council who controlled the setting up of these workshops, there was also a move away around 1489 due to the fact

²⁸ H.R. OLIVA HERRER, L'eau et le pouvoir dans les villes castillanes à la fin du Moyen Âge. Palencia, un exemple de concurrence de pouvoirs, in "Histoire Urbaine", 22, 2008, pp. 59-75, 66-70

that the fountains used up to that point had become essential for providing the townspeople with water. This sparked the opposition of those affected, who argued with the local council, leading to the intervention of the Royal Council in 1495, the latter ordering the workshops be moved to outside the town walls. However, opposition remained, forcing the local council to once again intervene. Finally, in November 1496, local council and tanners reached an agreement concerning where the tanneries should be located, away from the town centre where they posed a threat to the quality of the water consumed by the townsfolk.²⁹

It was thus clear to local government that there was a need to rid the town centre of any polluting industries, such that the decision remained firm, although negotiations did take place in some cases. The idea was for local government to procure a good image for the town as well as to make the life of the residents more pleasant in line with contemporary thinking. They also sought to act as was expected of them, since this would favour their dominant position, power and authority. As a result, they were able to reach an agreement with the craftsmen in question regarding where the workshops should be moved to or even, as occurred in Palencia, to provide them with part of the infrastructure. Yet the ultimate objective was achieved, namely ridding the town of the water and air pollution caused by dyers and tanners as well as other trades, which were moved downriver from the town in order to preserve the quality of its fluvial currents as occurred in the cases already highlighted, and in Cordoba, where the area in which flax was worked and wool was washed was located downriver from the town following a local council decision.³⁰

Another drawback of water which any town seeking to enhance its prestige and to project an air of importance needs to avoid is pollution caused by wastewater, rainwater and wastewater from domestic use. As is well known, lower-medieval Castile lacked sewer systems, although in certain exceptional cases an old system may have survived, as was true in Cordoba where part of it is still in use, in the form of the drainage system dating from the Muslim period and which carried wastewater to the river.³¹ This did not mean that people were not concerned about the matter. Towns and their inhabitants felt the need to maintain cleanliness and to ensure healthy conditions and hygiene, which meant regulating how wastewater was disposed of. In addition to the ordinances which established that nothing was to be dumped in the streets, both the local councils and residents sought ways to remove wastewater, whether this be due to rain or not. There is evidence of the existence of drains, small channels through which the water could flow out as well as channels for carrying away rainwater in Palencia, and in which residents were allowed to dispose of wastewater.³² Efforts were made to ensure the water could flow out freely from the walled area without encountering any blockages, such that the drains were

²⁹ E. JIMÉNEZ RAYADO, *El agua en el origen y desarrollo de Madrid en la Edad Media*, Madrid 2011, pp. 223-226.

³⁰ R. CÓRDOBA DE LA LLAVE, Higiene urbana y doméstica en las poblaciones castellanas del siglo XV, in Vida cotidiana en la Edad Media, ed. Mª DEL C. AGUILERA CASTRO, Madrid 1998, pp. 281-302, 297-298.
³¹ Ibid., p. 290.

³² H.R. OLIVA HERRER, L'eau et le pouvoir dans les villes castillanes à la fin du Moyen Âge. Palencia, cit., p. 59-75, 66-67.

regularly cleaned, as occurred for example in Burgos.³³ One notable case was that of Vitoria, whose exterior wall was surrounded by a cordon of water formed by a fluvial channel and a canal built in the XIII century. In addition to serving as the foundation for a number of crafts and trade activities (including flour mills and a fulling mill) and defending the town, this was also the passage through which wastewater was removed. This facility was controlled by the local council, who were also responsible for its maintenance and regular cleaning, activities in which people from the town and nearby villages under its jurisdiction took part.³⁴

3. EXPENDITURE AND SOVEREIGNTY

Before finishing, I feel it necessary to make a couple of remarks, albeit briefly, concerning the financial commitment which any undertaking relating to water or hydraulic construction work required, and regarding the hierarchy of the powers involved in municipal finances vis-à-vis the issue in hand.

From what we have seen thus far, it may be concluded that the construction, management and maintenance of any facility related to the use of water entailed a substantial financial outlay, given that the work demanded a significant initial investment, followed by constant spending on essential maintenance and repair. This is akin to what occurred with the main wall and occasionally the reconditioning of the streets, all of which was very closely linked to the town's image, as we have seen. Now is not the time to explore the issue in depth, and in fact I have already mentioned some of the cases referred to. For the moment, I will merely confine myself to a few specific examples which will help to shed some light.

The need to have water channelled to San Vicente de la Barquera entailed a substantial financial outlay such that in the last decade of the XV century, the crown authorised the local council to collect, and therefore spend, 269,285 maravedís to undertake the required work. Some years later, in 1506, a further 50,000 maravedís was needed to repair the wooden piping, of which 9,000 were to be paid to the master builder who carried out the work. On top of this were the 10,000 maravedís the local council paid each year to the person in charge of maintaining the supply channel.³⁵

In addition, there were other expenses. Both in San Vicente de la Barquera as well as in other coastal towns, work was undertaken in the latter years of the XV century to condition the quayside, which also meant investing substantial amounts of money. Such was the case of Laredo which, in order to have sufficient resources for the work, secured a major reduction in the amount it had to pay the crown for the *alcabalas*,³⁶ specifically 610,000 maravedís between 1495 and 1502.³⁷ Ensuring

³³ J.A. BONACHÍA HERNANDO, Agua en la documentación municipal: los libros de actas, in El agua en las ciudades castellanas durante la Edad Media, ed. Mª I. DEL VAL VALDIVIESO, Valladolid 1998, pp. 41-70, 67-69.

³⁴ J. RODRÍGUEZ FERNÁNDEZ, Relaciones de poder en torno al agua. Vitoria en la transición de la Edad Media a la Edad Moderna, in "Vínculos de Historia", 1, 2012, pp. 187-203, 190-191, 195.

³⁵ J.Á. SOLÓRZANO TELECHEA, J. RODRÍGUEZ, Infraestructuras e instalaciones portuarias, fluviales e hídricas en las villas del norte peninsular a finales de la Edad Media, cit., pp. 275-305, 295.

³⁶ Alcabala: a tax imposed on the sale-purchase of goods.

the availability of mills which the townsfolk could use was another area of expense to be borne in mind, as was the case in Oñate, which in 1488 took the decision to build two mills. In order to do this, in addition to providing the land and the wood required, the town budgeted some 46,000 maravedís to be paid in three instalments; when the work commenced, when the work was underway and once it had concluded, the final payment in this case being the largest, 26,000 *maravedís*.³⁸

In sum, using water and its enormous potential as both a material and a symbolic element³⁹ that could enhance the prestige and honour of the town and therefore underline and increase its power, entailed a major financial outlay which on many occasions failed to balance out with the revenue it could provide in return. Nevertheless, towns did invest in all of these areas, and even in the disputes and lawsuits arising from the use of water,⁴⁰ due to the fact that the social and symbolic benefits to be derived outweighed the drawbacks caused by the enormous expense involved.⁴¹

As regards the power to act in all matters related to the use and management of water in towns, the starting point is local council capacity for self-government, whilst not also forgetting the power which the lord might exert. In this sense, two situations need to be borne in mind. Firstly, towns governed by a lordship, in other words those subject to the jurisdictional power of a lord, whether lay or ecclesiastical; and, secondly, those subject to the crown, where the supreme authority was the king. In both instances, the local council had ample room for manoeuvre, although this is undoubtedly greater in the latter case. This meant that in towns under a lordship, when the local council needed to collect a large sum of money in order to cover extra expenses, in our case related to water, it had to seek authorisation from the lord, in this case, the bishop of Palencia.⁴² In the case of a town under crown authority, said authorisation had to be granted directly by the king, which is why local councils often needed to approach the crown to request approval when seeking to levy a special extra tax (*derrama* or *sisa*), as occurred for instance with León in 1488 when the bridges had to be repaired.⁴³

³⁷ M.Á. LADERO QUESADA, Las haciendas concejiles en la Corona de Castilla (una visión de conjunto), in Finanzas y fiscalidad municipal. V Congreso de Estudios Medievales, León 2-6 December 1995, Ávila 1997, pp. 7-71, 51.

³⁸ J. ZUMALDE IGARTÚA, Colección documental del archivo municipal de Oñati (1149-1492), San Sebastián 1994, pp. 235-239.

³⁹ Mª I. DEL VAL VALDIVIESO and J. A. BONACHÍA HERNANDO, La cultura del agua en la Castilla medieval: aspectos materiales, in Caminhos da Água. Paisagens e usos na longa duraçao, M. MARTINS, I. VAZ DE FREITAS, Mª I. DEL VAL VALDIVIESO eds., Braga 2012, pp. 143-162. O. VILLANUEVA ZUBZARRETA, J.C. MARTÍN CEA, La cultura del agua en la Castilla medieval: aspectos inmateriales, in Caminhos da Água. Paisagens e usos na longa duraçao, M. MARTINS, I. VAZ DE FREITAS, Mª I. DEL VAL VALDIVIESO eds., cit., pp. 125-141.

⁴⁰ Legal disputes over fishing rights were commonplace. See, for example P. GARCÍA CAÑÓN, *La pesca en los concejos de Luna de Yuso y de Luna de Suso (León) durante el siglo XV: luchas e intereses entre señores y pescadores*, in *Vivir del agua en las ciudades medievales*, ed. M^a I. DEL VAL VALDIVIESO, cit., pp. 181-202.

⁴¹ See M^a I. DEL VAL VALDIVIESO, Fiscalidad concejil y administración del agua en la Castilla del siglo XV, "Revista portuguesa de Historia", XLIII, 2012, pp. 105-128.

⁴² H.R. OLIVA HERRER, L'eau et le pouvoir dans les villes castillanes à la fin du Moyen Âge. Palencia, cit., p. 71.

⁴³ C. ÁLVAREZ ÁLVAREZ, *La ciudad de León en la Baja Edad Media*, cit., p. 89.

It should also be remembered that the power of the monarchy was spreading, such that in the late XV century it was evident throughout the kingdom as could be seen during the reign of the Catholic Monarchs, who embraced towns within their policy, making them a key feature in their efforts to govern and organize the kingdom. This led to them taking a personal hand in urban affairs, including those mentioned, encouraging towns to take action whenever they felt it necessary, whilst maintaining control over policy through the *corregidores*, but also through direct orders. Such was the case, for instance in Seville. Once Isabel I had gained control of the town in 1479, she began to reorganise the provision of water due to the enormous confusion that had arisen because of the poor condition of the main supply system, the Caños de Carmona, but also because water was being stolen at various points along the supply route.⁴⁴

Leaving aside this direct intervention which occurred at times concerning who the maximum authority over the town was, whether lord or king, any action taken tended to involve two stages. The initiative normally stemmed from the town itself which, fully aware of what was required, would consider the possibility of undertaking some new construction or maintaining an already existing one (which might be water pipes, a fountain, a bridge, or which would involve cleaning up a fluvial passage or some infrastructure that would help remove polluting trades and crafts from the town centre). When local council coffers lacked sufficient financial resources to undertake the work, extra compulsory taxation was considered. It is also true that in certain instances private donations were made to cover some of the construction work, as occurred in the XIII century in Vitoria when building the canal that surrounded part of the city, or in the case of bridges, where it was commonplace to have donations, as happened in Palencia.⁴⁵ However, what normally occurred was for funding to be secured through extra taxation, collection of which would require the approval of the lord or king, clearly reflecting the jurisdictional hierarchy at the time, always with the monarchy at the head of the chain of power. One clear example of this question of sovereignty and jurisdiction can be seen in Sigüenza, a town under episcopal control, which explains why when extra taxes were levied to cover the expenses arising from the water supply it was the cathedral council who intervened and made the relevant decisions, with the local council playing only a secondary role. The local council did, however, seek to exercise its power to act independently, resorting to the argument that it was they who actually had to demand and collect the tax, at least in some cases, with the authorisation of the monarchy. In 1515, Queen Juana I granted permission to collect an extra 40,000 maravedis in taxes to cover the cost of having the fountain and wall repaired. This was done after having commissioned a report in line with the usual procedure so as to assess whether the request should be granted.⁴⁶

⁴⁴ M.F. FERNÁNDEZ CHAVES, *Política y administración el agua en Sevilla durante la Edad Moderna*, Sevilla 2012, p. 126.

⁴⁵ J. RODRÍGUEZ FERNÁNDEZ, Relaciones de poder en torno al agua. Vitoria, cit., p. 192. H.R. OLIVA HERRER, L'eau et le pouvoir dans les villes castillanes à la fin du Moyen Âge. Palencia, cit., p. 72.

⁴⁶ P. MARTÍNEZ TABOADA, Urbanismo medieval y renacentista en la provincia de Guadalajara: Siguenza, cit., pp. 1482-1483.

The importance which all of this held for the local councils was reflected in their desire to secure the necessary resources to undertake the work, which on occasions led to them requiring the church to pay, an institution that was normally exempt from paying extra taxes. This was what Zamora sought to do in 1486, when the town council addressed the king and queen to request authorisation to force the church to share their part of the burden for the repair, amongst other buildings, of the bridge.⁴⁷

4. CONCLUSION

As has been seen, the success of towns and the new way of life they represent leads to a new relationship between inhabitants and their water, although it should be pointed out that interest in the matter grew throughout the XV century, reaching its peak during the reign of the Catholic Monarchs, Isabel I of Castile and Fernando II of Aragón, such that most of the work was undertaken late on. The towns and those who ran them were now keen to use water to enhance their image, give a more honourable impression and thus strengthen their position in the kingdom with regard to other powers and the urban nuclei. Local inhabitants also sought similar goals and to enjoy certain advantages and comforts. Yet this was not confined just to them. On a general scale, the monarchy displayed a similar interest throughout the whole of the kingdom. During the reign of the Catholic King and Queen, it could be seen how the monarchs sought to improve the material conditions of their kingdom, which included the towns. A good example of this may be found in their accepting certain local council requests. This included authorisation for local government to levy special taxes on the townspeople to cover the cost of the works referred to above, or the granting of compulsory loans for some of the more important works. The justification in such instances tended to be that this would make the town more attractive and increase its status. All of this reflects how, at the end of the Middle Ages in Castile, sound management of water and hydraulic resources was a tool in the hands of the towns and the monarchy, and was used to enhance the prestige of the town, and by extension, the kingdom, in addition to helping improve the living conditions of its inhabitants.

⁴⁷ F. HIDALGO, *El agua como condicionante de la estructura urbana: Lyon y Zamora, dos ejemplos del bajo medievo,* in *Agua y sistemas hidráulicos en la Edad Media,* ed. C. SEGURA GRAÍÑO, Madrid 2003, pp. 11-132, 128.