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Magdalena Martínez Almira

Utility and Benefits of Water in Andalusi Law. Criteria for its Proportional, Balanced Allocation and Distribution (8th and 9th Centuries)

Communicated by Ignaz Czeguhn

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Utility and Benefits of Water in Andalusi Law. Criteria for its Proportional, Balanced Allocation and Distribution (8th and 9th Centuries)

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Interest in the analysis of the legislation governing water use and distribution in al-Andalus is evident among scholars due to two facts: the coexistence of different legal systems and the implementation of a casuistic system of law. It deals with concepts such as responsibility and participation in water management and the conservation of water. This research is an analysis focused on justifying the roots of the Andalusi irrigation system that were grounded in Mudejar legal sources, which themselves were based on the Andalusi and Arabic sources applied in al-Andalus during the 8–17th centuries and beyond. The explanation of the irrigation system methodology concerns the migration from different territories, which allowed the implementation of new hydraulic facilities and, as a result, a new system of distribution and rational utilisation of water. Now is the right time to explain the contents of the water law enforced in the Iberian Peninsula over the centuries, thanks to the knowledge of case law from the Syrians, Egyptians, Tunisians of Qayrawan, and kadis of Ceuta whom were considered technicians in terms of *hisba*; a matter directly linked with water supply.

Utility; water regime *(al-aḥkām al mi'āh)*; irrigation shift; water scarcity; irrigators; common responsibility; al-Andalus

El interés en el análisis de la legislación sobre la administración y distribución del agua en al-Andalus es evidente entre los estudiosos del derecho, en virtud de dos hechos: la coexistencia de diferentes sistemas legales y la aplicación de un sistema legal basado en el casuismo. Con ello se gestionan conceptos como responsabilidad y participación en la administración y conservación del agua. Esta investigación se centra en justificar las raíces del sistema de irrigación aplicado por los musulmanes en la Península ibérica, a partir de las fuentes andalusíes y árabes aplicadas por musulmanes y mudéjares, durante los siglos VIII al XVII. La justificación legal del sistema y metodología de irrigación se debió a la migración desde distintos territorios, e hizo posible la aplicación de nuevas técnicas hidráulicas como resultado de un nuevo sistema de distribución y utilización racional del agua. Es ahora el momento de explicar el contenido del derecho de agua vigente durante siglos, gracias al conocimiento de los casos planteados por sirios, egipcios, tunecinos de Qayrawan y ceutíes, quienes fueron considerados técnicos en términos de *hisba*; la institución vinculada directamente con el suministro del agua.

Utilidad, régimen de las aguas *(al-aḥkām al mi'āh)*, turno, escasez de agua, regantes, responsabilidad compartida, al-Andalus.

Thanks to the invitation of Prof. Ignacio Czeguhn, it has been possible to participate in the research project B-1 Routes-Water-Knowledge, whose Spokeperson is Prof. Cosima Möller. I was invited as Senior Fellow and have been developing my research since 2016, based in the headquarters of the Excellence Cluster *Topoi*, Berlin.

1 Introduction

Water regimes *(al-aḥkām al mi'ā)* is an attractive topic for scholars of the Magreb and al-Andalus, though it has barely been addressed from the perspective of the Islamic law system *(fiqh)* in relation to Islamic transaction and commercial law, such as *qisma, kira*, and *hisba*, institutions related to the management of water. This was clearly evidenced by the disciple of Ibn abī Zayd al-Qayrawānī, al-Barāḏi'ī (d. 1049), the author of one important collection of *fatwā* recorded by al-Ḫaḍir in the 15th century for the Moorish[1]; by the kadi of Toledo, Ibn Sahl (d. 1096), the author of the *Dīwān al-Aḥkam al-Kubrā*; by the jurist from Malaga al-Ša'bī (d. 1103) in his masterwork *al-ʾAḥkām*; by the famous Averroes, Abū al-Walī Muḥammad b. Aḥmad Ibn Rušd (d. 1126); by Ibn ʾĀṣim al-Garnāṭī (d. 1426), the jurisconsult author of the *Tuhfāt*; and by Al-Wanšarīsī (d. in Fez 1508),[2] among others.

The rich development of the field of water regimes in Islamic law was supported by the interaction that occurred between Muslims, Christians, and Jews in the mid-seventeen century in territories governed by Byzantine law. The arrival of the new Muslim conquerors focused attention on how to conquer the land, adjusting to the demands of the soil and water in order to revitalize the barren lands. The same process occurred in al-Andalus over a century later, on the other side of the Mediterranean basin.

One of the main issues arising within the framework of the Islamic system on water regime matters is the type of legal relationships that were established with regard to this 'good'. In general terms, Islamic law foresaw two types of relationship.

Firstly, we will look at the relationship of the subject matter or thing *(māl)*. The subject matter, for jurists, is the reference object from which the different institutions related to estate law can be classified.[3] Thus, for example, water supply can be subject to *salam*, that is, to a commutative contract, even though the object upon which that business rests generates doubts about its legality due to restrictions on 'water trade'. Indeed, this contract is a sale with an anticipated payment of a price, which is fixed by a 'legal deadline'. There are a number of conditions for this contract: the compensation cannot be in the same currency used at the beginning of the transaction, neither in type nor in species. The type – quantity and quality – of what has been received as compensation should be specified, as well as data about the place where, and the date when, the business transaction will be carried out. All these requirements result in avoiding the uncertainty or *alea* and, ultimately, usury. However, the main problem concerning the object of this contract modality is the extent to which the *salam* contract is licit when the water, according to *šarī'a*, cannot be sold. In this sense, the doctrine only allows this business transaction to take place when the object is the supply of water for a specific time period and for a particular place. If the seller pledges to deliver a certain amount in terms of type, volume, and quality, he will not be allowed to receive compensation in the same currency or good. In the case of water, it is inferred that whoever makes the delivery does not 'sell' the water, but instead sells the right to receive the water; and he will not receive water as compensation, but 'bread and other things' that are the products that result from the use of water, as used to be done in al-Andalus pursuant to the custom prevailing amongst Mudejars. The Mālikī scholars, following the doctrine of Mālik,[4] saw water as a 'common utility good' which, in principle, could not be 'in the hands' of anyone on an exclusive basis, hence, why negotiating about it was not allowed; this becomes visible in

1 Montero Muñoz 2009, 18.
2 Al-Wanšarīsī 1983, 8; Barges 1887, 420–422; Al-Šaʾbī 1992, 72–81; Ibn Sahl 1978, 1093–1095, 1096, 1098.
3 Castro 2007, 63.
4 From now on, the term used to refere to the *madhab* or followers of a scholar will be doctrine.

the Andalusi legislation preserved until well into the 15th century, and applicable within the Mudejar community.[5]

Secondly, there is the legal relationship concerning the utility brought about by the 'good', and which are framed within the context of the legal 'right of use'. The utility of water provides a benefit that is in the interest of the community, guaranteed by means of special distribution, allocation, and protection, so that one can actually speak about the utility of the thing *(manf'a)*. In this case, it is impossible for someone to obtain benefits from water if they attempt to individualize water lawfully, as it is an object covered by very specific rules that prevent this. This is the key for understanding the special treatment of the 'right of way' in relation to water under Islamic law. Hence, the particular treatment and consideration of the 'water regime' applied in Iberian territories is deserving of further study via a case study, according to al-Awzā'i (d. 773) and Mālikī Andalusi law.

2 Denial of water ownership in Mālikī and al-Šāfiʿī traditions. The duty to share water

Water is one of the elements that under Mālikī and al-Šāfiʿī traditions cannot be the object of exclusive appropriation, but only of possession. This constitutes the key to understanding the limitations placed upon water as the object of legal transaction under Muslim law.

The way in which Islamic *maḏhab* – in this case, the doctrine taught by the followers of the scholar Mālik – avoided having to resolve issues related to water ownership was by referring back to the provisions contained in the text of the Koran. This avoided doctrinal discussions that, already under Roman law had led Ulpian to make a statement with regard to the opinion of Cassius, Labeon, and Ophilius on the exercise of the *actio aquae pluviae arcendae* (rainwater retention action).[6] In fact, informed opinions in subsequent periods, and of Justinian tradition, were also characterized by being suited and adapted to particular moments and specific water problems. This was a pattern that continued from Roman times until the 7th century, the time of the territorial expansion of Islam across Syria and Palestine (places under control of the declining Byzantine Empire).

Exactly as it had happened on the other side of the Mediterranean before the 8th century, Andalusi law defined that the water of rivers was not an object that anyone could 'appropriate'. It is for this reason that Ibn Rušd explained the scope of irrigation shifts in the use of water, and the system that was developed through different devices;[7] Al-Wanšarīsī compiled several fatwas of Abū ʾAbd Allāh Muḥammad b. ʾAlī al-Anṣārī al-Ḥaffār (d. 811/1408–1409), in which he stated that the people who owned lands on the banks of rivers could simply 'use' water to irrigate in accordance with their identified turn. Turns were allotted in correspondence with their location, beginning with those situated in the uppermost areas and then continuing with those who were in subsequently lower locations, pursuant to Sunnah and custom *('urf)*. In this case, two sources underpinned this general principle in water 'right of use' matters.[8]

For more than six centuries, the guiding principles were maintained without interruption in terms of proportional water distribution and allocation.[9] This is what happened in Lorca; twenty-four years had gone by since Lorca was taken over by the Christians and the king urged his people to respect the way in which water was 'allocated' between

5 Gebir 1853, 94–95.
6 Mommsen and Krüger 1993, Di.39.3.0. "De aqua et aquae pluviae arcendae".
7 Ibn Rusd 2000, 313–323; Al-Šaʾbī 1992, 118–122.
8 Al-Wanšarīsī 1983, 5.7–8.
9 Alfonso X 1298; Escobar 1921, 35–42.

community members, represented by the council of Lorca. This piece of information is important to justify the continuity of a system that had remained in force for centuries amongst farmworkers and water irrigators, as well as the way in which water was used: by means of allocation. Neither this document nor other contemporary documents mention the sale of water or prices for water. This peculiar fact, however, does not reduce the importance of other modalities of water allocation, such as the auction[10] of surplus water between the members of a community, pursuant to the rules that were operational within the framework of Andalusi law. Water allocation had to be performed in an organized way that took into consideration the needs of the landowners situated in the upper parts of the watercourse first, regardless of whether it was a river, an irrigation ditch, or a rainwater dam on a piece of land on higher grounds. In any of these cases, the water which was not used for the foreseen purposes – irrigation and consumption – had to be allowed to flow past, so that the same 'right of use' and enjoyment could be ensured for the other water users downstream.

As for the concept of water ownership and possession, the application of theories about the 'right to use' for water in al-Andalus aimed to obtain the highest possible yield from the lands that had passed from Hispanic-Visigoth sovereignty to Caliphal rule; more precisely, initially under Abbasid sovereignty, through the establishment of governorships and provinces ruled by emirs. Maximization sought to provide new settlers with land so that they could work it and ensure their own survival and that of their families. It was a situation that favored irrigation as a common model amongst the autochthonous population and the newly arrived people. The model, which has remained in use for centuries in the peninsular territory,[11] did so because it was a system, "which had worked since ancient times",[12] according to Segura Graiño. This productive model did not envisage exercising a right of ownership with regard to water, since that right is only recognized by Allāh, but it did refer to the use and the right to utilize water to one's own advantage. The only right that could be exercised in terms of ownership, was related to water that came from the rain, and which found itself stopped or dammed by man's actions, without limiting the moral obligation of supplying water to whoever urgently needed it.

The legal basis that prevents the exercise of exclusive property over water is that larger watercourses – the origin of which refers back to divine will – have no owners and do not belong to anyone *(ğayr mamlūk)*;[13] this category includes the water of large rivers, their tributaries, and seawater. According to tradition, Muḥammad specified that, following God's will, nobody could *own* water or plants and fire on an absolute basis, and any individual was allowed to utilize them on a private basis; in other words, in the same way that a Muslim is considered a 'brother' of all other Muslims, they all should share the use and enjoyment of common elements, such as water, trees, and fire. Nevertheless, Abū ʾUbayd (d. 838) clarified that this principle had an exception for those things that Muḥammad had categorized as being of exclusive protection.[14] From a legal point of view, water appears as the 'good' that brings welfare to Muslims, in terms of utility *(maṣlaḥa)*; everybody can enjoy water in an egalitarian way, without anybody being allowed to deprive others of it in an exclusive way. Even so, following Ibn ʾAllāq (ca.15th century), the possibility existed to exercise a right over part of this common good when it was held in a container.[15]

10 Barceló 1989, 57.
11 Segura Graiño and Miguel Rodríguez 2000, 23 390.
12 Segura Graíño 1984, 1013.
13 Maíllo Salgado 2005, 218–219.
14 Ibn Sallām 2003, 289.
15 Al-Wanšarīsī 1983, 8. 28–29.

In the light of the traditions on the prohibition against selling water, and using the opinions of both the author of Kufa, Sufyān ibn Saʾīd ʾUyayna (d. 198/813), cited by Abū ʾUbayd,[16] and the founder of the Mālikī School, Mālik ibn Anas (d. 795), as a reference, the ‘owners’ of water were not entitled to deny it to any traveler, or to anyone who needed it for themselves or for their animals.[17] It also could not be denied to neighbors, not even based on the existing need to irrigate a piece of land, thus, laying down the rules for water access according to the Mālikī School. The doctrine provides specific examples that were in force for centuries.

Indeed, the right to water amongst Muslims was that everyone should have access to it in order to address their needs. Consequently, those who inhabited areas located on the banks of a river course, who used the water that flowed through that course, could not be regarded as the owners or proprietors of the river or the water in their surroundings. However, water could be destined to the service of the households, the washing of latrines, and also the filling of cisterns; furthermore, water could equally benefit wells through infiltration, bringing utility not only to those owning the infrastructure in which the water was accumulated or stored, but also to whoever approached the infrastructure for a drink or to provide water to their animals.

Mālik had not yet died when Abū ʾUbayd expressed his opinion about water that overflowed its banks and was kept in containers or skins. Abū ʾUbayd explained that it was possible to sell such water, according to the jurists specialized in the matter of *fiqh*; in this case, the person who gathered the water and carried it acquired the right to use the water in return for paying a corresponding tax. Nevertheless, in the words of the Abū ʾUbayd, this opinion was based on a different chain of authority or *isnād*, thus, providing an idea about the diversity of criteria and opinions relating to a singular case.[18] As a support for this new criterion, Abū ʾUbayd took as his reference a tradition traced to a chain of authority of five people, all of them well known and credible (Nun’aym ibn Ḥammād heard about this from Baqiyya ibn al-Walīd, and the latter heard about it from Abū Bakr ibn ʾAbd Allāh ibn Abī Maryam, who heard about it from al-Mashīkha, who in turn knew about it from the Prophet Muḥammad). According to them, the sale of water was prohibited, with the only exception being water that was transported in a device built for the purpose of transporting water. Therefore, despite the existence of a general principle supported by traditions considered to be reliable, due to the short distance of the chain of authority (only five people), as time went by (in less than fifty years) exceptions or looser interpretations were also included. These exceptions were based on traditions communicated through longer chains of authority and, thus, susceptible to having some of their elements questioned due to a lack of credibility or the inability to verify the truthfulness of what was transmitted, making them weak in terms of content or style *(da’if)*. Nevertheless, in the light of water-related case law, signs exist of the application of these exception or loose interpretations, which were suggested to specialists and experts in the science of *fiqh (‘ilm al-fiqh)* for the proper application of the law.

In the event of separation of one portion of water for the benefit of a particular user, or of discovery of a well or spring in the country estate or rural land (*hawz*[19]) of an owner, Islamic law protected the exercise of private ownership, albeit while also establishing a moral obligation to share the water resource in favor of those who might need it to survive, both for consumption and to maintain their crops. In fact, the term *hawz* refers to the piece of land over which legal possession is exercised through ownership and the intention to exercise effective power with regard to it. Therefore, the property had neither an absolute

16 Fierro 1998, 70.
17 Anas 1982, 36.25 and 36.26.33, 346.
18 Ibn Sallām 2003, 293.
19 Maíllo Salgado 2005, 127.

nor an exclusive character for anyone. This criterion found its justification in the tradition narrated by Abū Huraira, who transmitted from the Prophet that, on Doomsday, Allāh would not take three kinds of individuals into consideration for salvation or Paradise; for these people, he would neither purify them or impose a severe punishment. The first of these individuals was a person who, having an excess of water, denied it to the travelers that he encountered on his way.[20] This was subsequently supported by Ḫalīl b. Isḥāq (d. 1374), who focused on a different hadith that advised against depriving any human being of water, and also advised against depriving crops and cattle of water, due to the utility brought about by its use.[21] This maxim appears in many of the consultations made by experts in Andalusi law over time.[22]

Something similar happened when the water came from a source or spring; the doctrine confirmed the right users had to extract water, since exclusive ownership over the source did not belong to any individual, nor to the public authority that was supposed to ensure the supply of water for everybody. The right of exploitation fell upon beneficiaries, a right that was passed down from one generation to the next, both for human drinking and so their cattle could drink. Most importantly, the passage of time did not limit anyone's right to access water; neither did it consolidate an exclusive right over a portion, or all, of the water when water was needed.

An interesting aspect to consider is determining the space around a well or source destined to ensure a water supply. In this sense, Abū ʾUbayd recorded a tradition from Abū Hurayra, in which he determined that the space surrounding a well had to be forty cubits, so that animals could drink the water. This was because the Prophet said that 25 cubits had to be reserved around a newly-created well and 15 cubits around an old well, whereas the space around a water source had to be three hundred cubits and around a spring used for irrigation, six hundred cubits. These measures were also discussed by other jurists, such as Al-Dārʾquṭni, from the teachings of Ibn al-Muṣayyaḥ, and it was even specified that the space around a well had to cover the same distance in all directions, at least with regard to newly created wells. However, this opinion was not unanimous; according to Ibn Šihāb's testimony, the communities who used such water resources and who established a measure of five hundred cubits – as a maximum surface of exploitation or utility of water from a source or wall – had the right to keep it forever. Abū ʾUbayd confirmed this distance of five hundred cubits and defended the extension of forty cubits as the exploitation limit for a well, at which nobody could be deprived of the right to water and to irrigation.[23]

The concern of jurists, in this regard, focused on arguing against water users who did not own land but benefited from water for irrigation and/or cattle feeding, from being able to sell surplus water; the prohibition was supported by the fact that if they did so, they were committing one of the actions forbidden for *salam* sales, insofar as selling water meant speculating on a public-use good. Any product – outside the *salam* business – had to be sold for a price in return; in the case of products subject to *salam*, the only possibility available was an exchange for products of the same kind and quality, without any chance to increase prices, as this would imply committing usury. The disposal or transfer of water had to be done in return for something, and then the price that might eventually be paid for it would be deemed forbidden, since water has no value in itself because it is a necessity 'good' that cannot be denied to anyone; let alone in the case of water coming from large watercourses such as rivers and tributaries on their way to the sea. This being so, doctrine determined that the correct, convenient thing to do *(ḥasan)* was to prohibit the sale of water, as well as the sale of excess water that a user had at any given moment.

20 Al-Bukhārī 1978, 3. 40, 547.
21 Isḥāq 1900, 1120-1122.
22 Al-Wanšarīsī 1983, 8.128.
23 Ibn Sallām 2003, 285.

This opinion was upheld by Abū ʾUbayd, according to a tradition attributed to Dāwūd ibn ʾAbd al-Raḥmām. An opinion reinforced by many others, such as Al-Nasāʾī, Yaḥyā ibn Saʾīd al-Anṣārī (d. 760–761) according to al-Qāsim ibn Muḥammad, was that all of them were aware of water intermittence and fluctuation that resulted in situations of scarcity, like those suffered by the inhabitants of al-Anṣār who constantly demanded solutions to their problems by the Prophet. This prohibition was strengthened by other traditions. One of them was transmitted by ʾĀʾiša, the Prophet's wife, who related what Muḥammad had said to ʾAbd Allāh ibn Amr about the prohibition of selling water collected in a well, as well as the prohibition against denying water to anyone who claimed it was needed to meet their needs.[24] Other, more widespread, traditions with great prestige amongst Muslims provide support for this general prohibition. An example was narrated by Yazīd from the testimony of two individuals who heard a woman called Buhaysa talking about the response her father had received from the Prophet; he said that certain goods, more precisely water and salt, could not be legally denied anyone in any amount; and whoever abided by this premise would benefit both on earth and in God's eyes.

Therefore, supplying water was an obligation for anyone who received water; it was a beneficial action for their fellow human beings and, additionally, praiseworthy from a spiritual point of view. First in line for water were the walkers and travelers, who had the undeniable right to receive water, as Šuʾba ibn Khaṭṭāb said, and Ḥajjāj transmitted. The reasoning for this lies in the fact that they depended on the vicissitudes of the way, they were subject to a lack of foresight, and an uncertainty of finding water along the way to meet their needs.

Taking up the issue of special protection by the Prophet, it is worth mentioning that the land destined to feed the horses utilized in war activities and the water that arrived in country or rural estates deserved his attention.[25]

In addition to these prioritized needs, the aspects related to growing land fruits raised issues about the rights of other claimants. From a general point of view, those who farmed with irrigation were situated first in the ranking of water users and beneficiaries, with the aim not only of meeting their survival needs but also of producing for others. At a more specific level, the needs of the latter were less relevant.[26] Being aware of the needs generated from working the land, especially from the work carried out by the people of al-Anṣar, the Prophet decided that no one in charge of the irrigation of the crops could sell water, even if they received an offer to do so; instead, they had to wait for their turn or apply for a shift, if needed to irrigate their land. Even when the water arrived, this person would have to respect the turns of their neighbors located in the areas closer to the watercourse. This is exactly what Muḥammad resolved with regard to the demand for surplus water stemming from the irrigation of the vineyard of Allāh ibn ʾAmr al-ʾĂṣ at-Ṭāʾif. He explicitly prohibited the sale of the water that belonged to ʾrom Allāh ibn ʾAmr al-ʾĂṣ at-Ṭāʾif's portion of water for irrigation. The portion of irrigation water was calculated with a perforated metallic bowl *(qild)* that was used as a measuring device. This device was described in the 11th century by al-Šā'bī as a facility used by the irrigators in Malaga's irrigated lands *(saqwī)*, from the time of Ibn al-ʾAṭṭār.[27] Al-Šā'bī answered a questioner interested in how to distribute water *(qisma al-mi'āh)* during the day and night that he should use the *qild*.

The action of irrigation (from the Arabic root *q-l-d*[28]) was possible after having determined that water was a necessity good and once the number of people who requested it

24 Ibn Sallām 2003, 287–288.
25 Ibn Sallām 2003, 292.
26 Ibn Sallām 2003, 288–292.
27 Ibn Sallām 2003, 288–292; Al-Šaʾbī 1992, 122.
28 Corriente 1977, 139.

for such a purpose had been specified. This procedure was not applied to the territories that produced crops in summer without the need to use man-made irrigation systems *(ba'lī)*. In this sense, there is a justification for the allocation or distribution *(qisma)* to be carefully regulated by the taking of turns, which was an approach applied in territories inhabited by Muslims, as described by al-Māwardī (d. 1058).[29] However, water was not only taken by turns but also 'came by turns' *(taqālad)*. I recognize three modalities of irrigation: firstly, rotation in the use of water every certain number of days – foreseen for cases with a small number of irrigators – and for a number of hours if there were many users; secondly, when faced with a dispute over access to fluctuating and/or scarce water, the fixation of lots which were assigned and enjoyed, following an order established on the basis of proximity to the source and the need for a minimum amount of water to cover demands associated with growing crops, punishing those who violated or failed to respect the established turns; and thirdly, digging an irrigation ditch or canal once a communal agreement had been achieved over the proportion of water necessary to meet the existing needs.[30] The cut-off of the water flow was employed – even nowadays in areas of irrigation it is based upon traditional systems – through the *adufa*, a floodgate that is operated by the irrigator via manual action.[31] The distribution of water with people taking turns was considered one of the main systems for maximizing use and sustainability by Ibn Rušd in al-Andalus, and one of the main topics focused on by scholars in their *fatwā*.[32]

These and many other answers along the same lines were used before the lack of water permit to recognize the irrigators' capacity to manage water following fair and proportional allocation criteria. It was indeed so because the irrigators or farmers *(al-tānī)* were entitled to manage and administer the water that came to their piece of land, in order to meet the needs of their crops and cattle. This entitlement was formally organized and regulated according to the principles already mentioned and repeatedly stressed by experts in law through the issuance of their opinions and answers to specific consultations. This was the accepted practice amongst water users and these were the rights that were defended in the context of the community, even after the arrival of the Christians.[33] This can, for example, be seen in the documents on the conquest of Castille and Aragon. When the conquest was already well under way in Aragon, Alfonso el Batallador granted the 'good Moors' of Tudela *(Buenos moros de Tudela)* the maintenance of all the officers and leaderships positions (*alcudia, algalifos, alforques,* and *alfaques*) for the governance of their "industries and chores in orchards and irrigated areas" in 1115.[34] Similarly, Alfonso X, of the Christians, and Moors of Lorca (Kingdom of Castille), recognized the main role of the municipal council in defending the interests of water users and beneficiaries, as had been done thus far. They recognized the general regime for the right of water use, at least with respect to the construction of ditches, canals, and drainages systems,[35] in the face of claims of the right to water not being considered on the same terms and conditions as under Andalusi law[36] as had been explained. Custom and traditions related to water, led the king to make a statement and explicitly recognize the 'right of use' for individuals to receive the water that they might eventually need, forbidding the monopolization and private retention of water by the landlords:

29 Al-Māwardī 2006, passim.
30 Al-Māwardī 2006, 198-9; Martínez Almira forthcoming.
31 Pando Villarroya 1997, 71; Corriente 1977, 261.
32 Ibn Rusd 2000, 2, 317–323.
33 Alfonso X 1298. English translation by Adriana Gil Martinez.
34 Muñoz y Romero 1847, 1.414–417.
35 Möller 2016, 12–19.
36 Barceló 1989, 48–49.

> Please know that the town council of Lorca complained that the lords of the lands donated by the king have all the water and do not let it flow out of their orchards neither to grind wheat nor for any other thing; thus losing the bread [...]. I am astonished if this is so. Hence I urge you and I command you to go and see the general condition, and divide the water and distribute it among the community by day and by [time], so that there is no strife for this reason from now onwards. Issued by the King in Seville on Sunday 23 September 1306. I, Pedro Gonçalvez, scribe of Garcia Dominguez, notary of the King in Andalusia, had this written.[37]

3 Implementation of the traditional water regime *(al-aḥkām al mi'āh)* in al-Andalus

3.1 Principles of the distribution of water

The most visible expression of the communal nature that water had – and continues to have – can be verified by the way in which it is accessed, giving the opportunity of every user to access it, for any need that they may eventually face. A hierarchy can be imposed upon that access according to a series of criteria and rules commonly accepted and guaranteed by tradition-based laws. The importance of the community becomes evident in terms of the observance of the rules and provisions by all involved in water use and enjoyment, and in the respect for the people in charge of monitoring and supervising that the system worked properly, in accordance with the customs and practices amongst Muslims and the Andalusi population. In this respect, it must be stressed that in this framework of relationships related to the 'right of use', the doctrine places the most emphasis on providing responses case-by-case, based upon the right that everyone has to water, and issuing orders oriented towards the exclusive exercise of that right. There appears to be a turning point with respect to other legal systems in force around the peninsular territory,[38] especially in the moment in which Muslim sovereignty gave way to the Christian one, but even when faced with this new situation, kings assumed the role of assigning the ownership of a 'good' that belonged to them as a conquest right. Nevertheless, under no circumstances could they deny it arbitrarily; it was attested for centuries that the authority exercised a discretionary policy in favor of users, either laymen or ecclesiastics, who were always given priority to satisfying their needs first. In fact, the criterion of shared benefit and right to a 'good' was maintained, the proper administration of which was everyone's responsibility. It could not be demanded only by the beneficent rulers, but also by all beneficiaries.

According to al-Šāfiʿī, the exact limits of a river in a barren land were determined by custom.[39] The limits of an irrigation ditch had to be fixed in a similar way, since it was considered an inland river, or derived from an inland river. Abū Ḥanifa defined the limits of a river as the sides on which mud was deposited; in the opinion of Abū Yūsuf, the fixation of the limits or edges of an irrigation ditch took into account the

37 Alfonso X 1298. In the original: "Sepades que el conçeio de Lorca se me embiaron querellar que los sennores de los donadios tienen toda la agua que la non dexan salir de sus huertas afuera pora pan nin pora otra cosa ninguna, fet por esso] que pierden los panes ca [...]. Et si asi es so ende marauillado. Ende uos ruego et uos mando que uayades y et que ueades en qual guisa es, et partidles la agua comunalmientre por dias et por [tiempos], de guisa que ninguna contienda non aya daqui adelante sobrestá razón Et non fagades end al et fazer [mié en] ello seruicio. Dada en Seuilla, el rey la mando domingo XXIII dias de septiembre, era de mili et CCC et VI annos. Yo Pedro Gonçaluez, escriuano de Garcia Domínguez, notario del rey en la Andaluzia, la fiz escreuir." – English translation by Adriana Gil Martinez.

38 Villaba Sola 2016, 82–94.

39 Al-Māwardī 2006, 197.

surface that retained "the water and prevented it to overflowing."[40] Islamic law defined a number of methods to create a balanced and proportional use of the water destined for legal purposes. The relationship between user and water can be verified through the ownership over the country estate or the piece of land through which the water flowed, which contained or retained it. The 'right of use' corresponded to whoever had taken possession (*ḥawz*[41]) of a place or land and was entitled to use and enjoy the things that were located within it, like the water of a well or spring on the land. It also fell upon these landowners to use the surplus water to irrigate or revitalize barren lands *(arḍ-baīda)*.

However, in this case, the doctrine discussed whether the ownership of surplus water belonged to those who exercised ownership over the lands the watercourse was situated upon, or at the source of a river or spring, or, instead, if the water had to be allocated to anyone who requested it. The question, repeated by Andalusi claimants before different scholars, was expressed under three cases or possible means of resolving the situation:

a) Firstly, they considered whether the surplus water of a piece of land owned by an individual could be proportionally distributed in equal parts between claimants.

b) Secondly, they considered whether the surplus water could be proportionally allocated to the extent of the lands that they worked.

c) A third possibility subject to assessment was to follow an order governed by the proximity of the country estate or piece of land to the water source, or to the piece of land with an excess of water.

This was resolved by Sayydi Miṣbāḥ ibn Muḥammad ibn ʾAbd ʾAllāh al-Yalisūti[42] according to the right of those who owned or farmed the lands, to whom the best right over water use and allocation belonged, where applicable. Sayydi argued that those who had no land but needed water could not request it, insofar as it had no utility at all; in the event that they did have lands being used for crops, he referred back to the previously explained Mālikī doctrine, which stated that the right to water was acquired on the basis of proximity to water or to the source or spring it came from. In his view, owners had the privilege to irrigate their crops, beginning with those situated in the uppermost country estates, and so on and so forth, until reaching those whose property was located furthest down the watercourse. According to Sayydi Miṣbāḥ, this rule dated back to the times of the Prophet, when he established this order for the benefit of the inhabitants of Medina, who aspired to use the water from the Mahzur and Mazinib watercourses. A similar argument was made by al-Qābisī, in response to someone who asked him who was the owner of the brushwood that arrived that was carried by the river flow; the answer was clear, the sediment belonged to the owner of the land that the river crossed, because "the owner of the water flow only has the right to the water passage, and nothing else."[43]

Hence, the method followed three different modalities of water usage.

a) Firstly, users had to 'draw lots' for the use of the water or schedule it by rotation every few days when there were not a lot of users or every few hours when many users had to share this 'good.' Should a dispute arise, lots had to be drawn in order to determine the order of use; each person had to assume and accept their turn, as it was forbidden for them to meddle with the water of the other co-owners or to limit it.

40 Al-Māwardī 2006, 199.
41 Corriente 1997, 143.
42 Al-Wanšarīsī 1983, 5. 132–133.
43 Al-Wanšarīsī 1983, 9.44.

b) The second method consisted of dividing the water on a wooden board spread across the river from one side to another, with openings that let water come through according to specific quotas or the number of participations, so that each user could take their proportion of water in their turn.

c) As for the third method, it envisaged that each user would dig an irrigation canal with a specific volume, either by general agreement or in proportion to the surface area of their properties; in this case, they were supposed to have a fair or reasonable proportion (or allocation quota), in keeping with that of the other co-users, neither having a greater or lesser proportion than the others. Nobody was allowed to bring forward or delay the timing of the opening of their irrigation ditch (canal), and likewise, no inhabitants of a street were allowed to open the access or exit door according to their own will. After all, moving the door opening forward meant that the person whose turn it was would lose a part of their water allocation and the person who opened it earlier would benefit from the water that came through the irrigation ditch before their assigned time, resulting in them obtaining an extra advantage (at the expense of another, which was forbidden).

Proximity to the source or the spring as a determining factor for utilizing the water, to the detriment of other claimants, was not accepted by all jurists. Al-Badjī (d. 1041), who was born in Badajoz and died in Almeria, made a comment about this *hadith* or interpretation, justifying that such an order had to bear in mind when each one of the lands started being farmed.[44] Expressed differently, in addition to proximity to the spring or source, it was necessary to respect the priority of the timing of the cultivation of the land and, therefore, those who first revitalized the soil would be more entitled to use the water, considering the benefit that they expected to obtain from their work; and so on and so forth. On the other hand, if two farmers planted at the same time, then they would both have the same right to the water, and only had to abide by the first of the criteria. Notwithstanding the preferential right of the country estates on higher grounds, if the farmer of a piece of land located further down the water course had begun growing the land before the one located above it, that farmer would be allowed to exercise his 'right of use' of the water to benefit the crops already initiated in the event of water scarcity.

The Granada-born muftí Abū ʾAbd Allāh Muḥammad b. ʾAlī al-Anṣārī al-Ḥaffār (d. 811/1408–1409) was consulted about the right of the irrigator of a ditch to use the water for lands sown in the summer and autumn.[45] According to the doctrine, water had to be distributed between all inhabitants of a location,[46] regardless of whether they utilized it for productive purposes; however, an experienced jurist was asked about the legality of the users of an irrigation ditch that, contrary to the widely accepted criterion, did not divide the water between everyone but only between those who had sown their lands. This practice or modality, thus, contravened 'the use' accepted by everybody, in short, custom. His answer highlighted two closely related issues: the first one being that since the water of the river did not belong to anyone, the irrigation ditch that might deviate the water for the benefit of other pieces of land was not 'owned' by anyone either, and the second, that each and every person was entitled to take advantage of the water, and to utilize it for productive purposes, consequently for their plantations, trees, and any other needs.

It can be inferred from this answer that no one had the right to deny water to anyone who might need it for any purpose, both if it was used immediately or if a decision was made to do so in the middle- or long-run. However, those who had no intention to use the water as a means to obtain fruits or products from the land were not allowed to deny

44 Montero Muñoz 2009, 264.
45 Al-Wanšarīsī 1983, 7. 7–8.
46 Al-Māwardī 2006, 215.

that same right to those who sowed the land; the law guaranteed the utilization of the water 'needed' to irrigate and to properly obtain the fruits.

This discussion, additionally, permitted the specification of two other controversial aspects that could cause conflicts to arise. The first one of them being that river water could not be appropriated by anyone; all individuals were allowed to take advantage of river water to irrigate their lands, pursuant to a prior agreement and in their established turn. In this sense, jurists referred back to "the sunna and custom practiced by men," or depending on "the use and practice of the place where the allocation needed to be made; and in this case, nobody could contradict what was laid down in the 'mutually agreed' upon provisions." [47] This is an essential fact that is needed to understand the role played by users pertaining to 'irrigation communities' or 'water user communities'. The second issue that could generate conflict, had to do with the possibility that a beneficiary of a water right that had been transferred or who handed over his 'right of use' of the water (in ancient Andalusi sources the word used is *taxada*). This possibility was exclusively recognized for someone who had acquired the right over the water at the same time as they obtained their land (thus, creating a link between the idea of a water right and owning a piece of land, making them impossible to separate from one other), or to whoever had bought a piece of land that was reported to have a source of water or spring from which water emanated.

Andalusi doctrine thoroughly discussed such cases. Therefore, an agreement reached between the users of a source of water or a spring prevailed over the right to irrigate the lower lands that were under production. Nevertheless, these agreements were not operational in the case of rainwater. It was not legal to undertake to make an agreement about accumulation of rainwater to the detriment of any user, according to the opinion expressed both by Ibn ʾAllāq, a contemporary of Muḥammad b. Aḥmad ibn Marzūq,[48] and Ibn ʾAbd ʾAllāh al-Yalisūti.[49] This agreement insisted on the 'right of use' and the effective arrival of water, according to the agreed upon turn taking *(mudda)*.[50] Seeking to justify the need to distribute water and make it easier for everyone to be able to use the water and take advantage of it, Ibn ʾAllāq clarified his stance regarding the right *pro indiviso* of the owners of a source if they shared the water pursuant to a previously established convention or agreement, and the possibility to benefit from the quota assigned to anyone who, despite being a party to that agreement, did not exercise their right. The aforesaid author concluded that priority had to be given to the interested parties, present or absent, legally of age or minors and women, provided that a representative acted on behalf of those whose capacity was determined to be 'limited';[51] and any agreement in this respect could be enforced.

Water utility stemmed here from the right that each of the users had to exploit the water for the benefit of their respective pieces of land and the agreement that they had reached with regard to the proportional allocation of the water. An allocation that was by no means viable if the origin of the water was a mountain or from rain, insofar as, in that event, water could not be stored and no ownership could be exercised over it on an exclusionary basis.

47 Al-Māwardī 2006, 200.
48 Al-Wanšarīsī 1983, 8. 27–28; Boum and Park 2016, 247.
49 Al-Wanšarīsī 1983, 5. 133.
50 Ibn Rusd 2000, 2, 317–323.
51 Ibn Rusd 2000, 2, 317–323.

3.2 Distribution of water: a 'legal business'

The right to utilize water for irrigation under the conditions described above extended over time, without it being possible to deprive people who had used that resource for a specific number of years of that right. This section refers to the right of a person who benefits from an easement *(marafaq)*, even though a certain disparity of criteria among Mālikī followers exists in this respect. The term that describes this type of legal business is *hadama* (خدم[52]); the meaning of the Arabic root of this word *(h-d-m)* means to serve, to be at the service of, or to work for or amongst others. Additionally, it can mean to work the land (ألارض خدم), or more precisely, servitude, insofar as it refers to one's subordination to someone else, expressed through the term *hādīmya*. It must be pointed out that, according to Corriente, the letter ذ is used instead of د for the term servitude, being the one that appears in the root, to serve.[53] Moreover, servitude of aqueduct corresponds to the concept *haqq marūr al-miy'ah*, whereas easement is *haqq al-marūr.* These concepts emphasize the right *(haqq)* of the user over the object in question (the water way or the water). This analysis becomes interesting because the verb *rafaqa* means to help or assist, and the noun *rāfqa* means company or society, and the same term can even mean company, group, or party.[54] Already in the specific context of law and business, the doctrine of Ibn Lubb, and more precisely the sources for the application of law in al-Andalus,[55] refer to the free granting or *al-irfāq*, which is the modality accepted within Islam to avoid committing usury or *riba,* instead of access-easement. In legal terms, and with regard to the contractual relationship between the interested parties, the concept *al-irfāq* describes a business that raises some issues, at least in relation to servitude in Roman law. The following question may, therefore, be posed: Is it possible to speak about servitude in the same sense as it is used in Roman law?[56] Or instead, is servitude in Islamic law an association of individuals participating in a business on an equal footing – according to equality and proportionality criteria – rather than via subordination? In either case, it seems advisable to clarify some of the elements that characterize this type of business, concerning water laws.

From a theoretical point of view, the individuals interested in water share the use and enjoyment of a common good; they actually form part of a 'society' based on a contractual agreement: a mixed business which has both sale elements – transfer of a property – and elements related to the transfer of the 'right of use'. The capacity to have the item available corresponds to the partners or participants in a business, without the partner to whom the thing originally belonged to losing control. Together with this modality, Islamic law allowed for the formalization of businesses associated with the protection or management of goods belonging to someone else; these legal relationships correspond to the mandate and deposit – two special institutions closely related to charitable contracts, in this case. Free and charitable businesses are varied and seek only to provide a benefit to the other party, not to obtain compensation. Donation *(hiba)* is the standard contract and similarly we can find the mutual contract *(qarḍ)*; a contract which theoretically has to be free to avoid incurring *ribā* or usury. Amongst the different modalities appears the 'commodatum', a rarely relevant contract in the works of the early times of Islam in al-Andalus that refers only to the assignment of a certain amount of money to administer and negotiate on the behalf of a lender. Certainly, in the work of Ibn al-ʾAṭṭār, this business appears related to what Chalmeta-Marugán[57] identified with the 'commodatum' or *qirāḍ*,

52 Corriente 1977, 201.
53 Corriente 1977, 202.
54 Corriente 1977, 304.
55 Al-Wanšarīsī 1983, 6. 30.
56 Gerez Kraemer 2008, 27–29; Möller 2016, 13–14.
57 Ibn al-ʾAṭṭār 2000, 31, 209; Ibn al-ʾAṭṭār 1983, 92.

in which special attention must be paid to the agreement about the benefits for each of the parties involved. This is a contract that consists of giving or assigning a thing to do business, with the obligation that that thing be returned, with the condition that it will not be consumed or destroyed. The use of this modality, in relation to water, was reported by Sayyidi Miṣbāḥ ibn Muḥammād ibn ʾAbd ʾAllah al-Yalisūti and Ibn Lubb.[58]

As a matter of fact, a distinction can be drawn in terms of water use between the voluntary association of water users and the relationship of subordination between whoever had the right to utilize the water resource and decided to share it or assign it to a third party *(mūdil)*. This concept refers to the assignee of a usufruct right, and therefore, when it comes to water, to the person who decides, and is a term included in the Collection of Andalusi sayings carried out by Alonso del Castillo, as Corriente explains.[59] In this last case, a variety of limitations existed because the business association generated by the persons interested in water did not allow price fixing on this good that was considered a public, common utility. No price could be placed on water, since it had a public utility; otherwise, it would lead to a forbidden enrichment *(ribā)*. This is the key to understanding the limitations that existed when it came to establishing servitude or exceptional charge over a country estate or a piece of land for the benefit of another, especially when dealing with water, to which everyone was entitled and which nobody could be denied.

Ibn ʾAllāq argued that, should a group of individuals agree to use the water from a torrent or another water source, and the landowner who initially benefited from it lost their right to it, water ownership would pass to a third party. This would be true even if the land remained unirrigated for more than thirty years and others took advantage of that volume of flow following an authorization and canalization, and even if the original owner sold the land to a third party. Neither the first owner nor the second owner would be able to deprive users of the water that they used pursuant to the initial agreement, along with the means and resources built for that purpose. This acquired right prevailed regardless of the time elapsed since the sale of the property through which the water flowed. After all, the object subject to transaction was the land or country estate, regardless of the water that might correspond to it, and which could by no means – according to the aforementioned source – be separated from the land that it initially served or through which it flowed. Indeed, according to Ibn ʾAllāq, if land irrigation depended on an agreement about the use of a community, public good, the owner of the country estate through which the water flowed was not entitled to raise any objections, since this was the criterion upheld since the times of Caliph ʾUmar.[60]

Andalusi legal experts settled some of the issues raised based on opinions that differed from that of the most renowned Mālikī, as had the jurists of early times, like Abū ʾUbayd, a fact that generated conflicting positions between the orthodox members of the Mālikī School. A number of cases deserve special attention because they mostly refer to the possibility of the creation of enforced servitude in regards to rivers *(nahar ya'ra)* and over the water flowing through them. Additionally, demands were also made in relation to water from wells (*bī'r/pl. ābār*[61]), from public springs, and from resources that flowed freely along paths that were naturally or artificially exploited and had the status of 'public wells' *(sabīl/asbila)*. Furthermore, Andalusi law endorsed free access to water for anyone who might need it, in accordance with the legal interpretations supported in the *qiyās*.

58 Al-Wanšarīsī 1983, V, 133–134, VI, 308.
59 Corriente 1997, 188-XIII.
60 Ibn Sallām 2003, 286.
61 Corriente 1977, 29; Pocklinton 2016, 2 233–320.

3.3 Discrepancies in water distribution

Judging by the informed opinions of the first jurists, certain discrepancies existed in relation to the water located in delimited spaces or in spaces where country estate ownership could not be questioned. There were two highly controversial cases that explore this. The first one focuses on access to the water stemming from wells in urban spaces, and the second one, on access and use of water in wells located in open spaces. For the first case, no limits or restriction could be imposed on thirsty people or on those in need of water, despite the principle according to which the owner was allowed to do whatever he wanted with this 'good' within the limits of his land.[62] As for the second case, access to water could not be prevented either, applying by analogy what had been determined previously in terms of favoring travelers and the cattle being driven by them. Nevertheless, before the question of whether it was legal (or whether a right existed) to receive compensation in return for providing water services, the doctrine advised not to charge for this service because of its communal nature. It was not possible to demand compensation for the water from those who dug wells to meet their needs or from those who provided water to their cattle, on the grounds that the purpose of the water was to benefit the 'community of Muslims'. This also held for those digging wells in wild or deserted areas; compensation could only be requested by the owners of wells that were situated inside the households or on barren lands. In regards to payment for water in the proximity of irrigation ditches, Abū ʾUbayd claimed that nothing specific had been said. It is precisely that lack of specification that caused the many consultations made by those who used irrigation and other water users, as recorded in Andalusi documents.

Another institution where water availability was guaranteed, in favor of community members, was the immobilization of water for charity purposes, *ḥubus*. This is the so-called 'dead hand' immobilization, endowment, or pious foundation (*waqf* or *ḥubus*), according to Islamic law. A modality that actually meant carrying out a 'usufruct donation', and which very often referred to the water that arrived at mosques, the utility and benefit of which were destined to accrue to faithful believers. After the loss of Islamic sovereignty, all of these goods came to be owned by those who held the ownership of the mosques that had been consecrated as Christian, and accordingly came into the hands of the Church.

In fact, the *ḥabus* goods allowed for the reservation of certain goods for the community, so that community members could benefit from their utilization, with an explicit prohibition against their use by non-Muslims. This institution was defined by Ibn ʾArafa as the "donation of the usufruct over a thing, for the duration thereof, whereas bare ownership belonged to the donor";[63] however, there was actually no donation at all, insofar as no transfer of the 'good' effectively took place. Nevertheless, according to the doctrine, different cases or modalities might arise. The first one was that the owner controlled the *ḥubs*, or immobilization of the item for their own benefit via the introduction of streamlets or courses with a specific volume of flow. They were entitled to continue enjoying the use of the water, without any changes in the modality of the tenure of water. In this case, the *ḥubus* was valid if the immobilization of the asset really occurred (both regarding movable and immovable assets, entire goods, and indivisible parts), if it could not be sold, and if this was done as a liberality between Muslims (since utility had to revert to themselves and, thus, mosques were the most common subject of *ḥabūs* goods).

This modality could also involve the canalization of water, i.e. the establishment of an irrigation ditch for the purpose of supplying water to irrigators or to tanners who needed it to tan their leather, with no room for restrictions or actions that were detrimental to the

62 Ibn Sallām 2003, 286.
63 Al-Wanšarīsī 1983, VIII, 313.

water.[64] Secondly, the immobilization of these goods – and especially of water – generated some doubts when Muslims arrived in Christian territory; indeed, the goods immobilized in churches were not licit for Muslims because they had been instituted in the name of a false God by mistake, and not for the benefit of Allah. As a result of this situation, a number of jurists, such as Abū l-Faḍl ʾIyāḍ, believed that the ownership of those goods had to revert to those who had pious aims for their faith, claiming them as legitimate owners.[65] However, his belief did not apply to goods that had been immobilized in favor of religious institutions; the owners of these institutions were unknown, or they had abandoned their lands choosing to expatriate themselves. Following this, the goods were immobilized in favor of the public treasury *(bait al-māl)*, the ownership of which fell upon the community of believers, which was supported by the revenues coming from alms-giving *(zakāt)*, the goods stemming from the territorial tax, the capitation tax paid by non-Muslims, the tithe on the value of Muslims' crops, the consignments derived from *inter vivos* or *mortis causa* acts, and even a fifth of the war booty, constituting the consignment known as *fay'*. This water management approach, as part of the public utility goods, was maintained without interruption after the loss of Andalusi sovereignty.

4 Protection of users and officers' 'right to use' for water

Water management and usage also caused havoc in urban areas as well as in the rural context. In both cases, the 'right of use' for some could cause damages to third parties; when no agreement was reached to find an amicable settlement between two parties, legal actions had to be initiated. Amongst the different cases, the doctrine referred to the building of drainage systems and rain gutters that had affected someone else's situation. Taking the solutions arrived at and the divergence of opinions about the issue as a reference, it must be highlighted that disparity very often arose due to the lack of agreement on the deadline to undertake the action against the owner of the infrastructure that had caused damages to their neighbor. According to the Mālikī School, the statute of limitations for exercising such a claim was ten years, meaning it was impossible to lodge a claim after the ten years had elapsed without a formal complaint being officially recorded; nevertheless, according to the information provided by Ibn al-ʾAṭṭār, Aṣbaġ proposed a longer statute of limitations, which could be extended up to twenty years, more or less. In this respect, the Mālikī School suggests a variety of solutions, with judges freely assigning statutes of limitations, on a discretionary basis, taking into account that both the *hadith* and the doctrine that rejected depriving a Muslim of a right that had been granted to them (the right to water in this case) only because they have not exercised that right for some time. Therefore, disagreement not only existed about the duration of that statute of limitations but also about the most important premise: the right to water cannot be gained by acquisitive prescription or usucapatio.[66] This right could also be claimed when there was an explicit relinquishment of one's right to water by the person who had the right to that water, as in the case of the owner of a well in his country estate when he had not made claims for some time and had remained silent when a third party exercised their right to the water; this was not determined by the doctrine but subject to the judge's own judgment. This issue is controversial when it comes to water, especially when the 'right of use' cannot be exclusive when it is to the detriment of whoever has an urgent need to drink or to ensure that their heads of cattle can drink, or even to irrigate their crops, which had been established a long time before on the land. The problem arises when one considers

64 Al-Wanšarīsī 1983, VIII, 255–256.
65 Al-Wanšarīsī 1983, VIII, 319.
66 Martínez Almira 1999, 80–81.

the object that someone aspires to having a right to: water. The water resource, as a public and, therefore, common good *(mubāq)*, could not be appropriated on an exclusive basis and, consequently, no statute of limitations could be provided as a reason to extinguish someone's 'right to use' due to an individual or a group not exercising that right.

The experts in legal institutions *(muʿāmalāt)* were those who resolved legal cases or conflicts relating to water. Many of the cases related to the protection of access to water and refusing its exclusive use. Kadis were the ones who determined responsibility for actions taken that were against the law, and the consequences stemming from such actions. Therefore, a distinction in terms of competences and functions can be made *a priori* between kadis –obliged by their capacity as experts in Islamic law, *muǧtahid,* to refer back to the primary sources – the Koran and the Sunnah[67] – and the experts in applied law and, accordingly in forensic praxis, in the *ʿamal*, who are known by the term *muqallid.* This is a key point for understanding the competences of several officers, whose titles were retained after the Christian conquest of Iberian territories, although some titles remained under the same name, other position names were translated into a Spanish equivalent. The kadi could appoint disciples, since he applied justice in the name of the sovereign that had appointed him and this, therefore, explains the appointment of people able to help in cases of water conflict outside of the city and in the suburbs.

When it came to supporting a solution to a legal problem, the *muqallid* had to refer to his school's doctrine, instead of referring to the Koran or the Sunnah. The kadi was obliged to refer to the primary sources of law; and as far as the Sunnah was concerned, to the *maḍhab* or doctrine to which he belonged or in which he had been trained. In other words, if he passed a sentence based on the doctrine of a *maḍhab* other than his own, the sentence could be declared null and void.

The consultations made with experts in the water regime were settled pursuant to the general principles of the Koran and the Sunnah, placing a special emphasis on the nature of water as a 'common good' *(mubaq)*. The unanimous opinion of Muhammad's partners about what he had said and what he did was regularly referenced and justified by the testimony of experts in *fiqh*, which is when a unanimous agreement was reached between Muslim community members, that is, by resorting to the *iǧma*. Analogy *(qiyās)* was exclusively utilized in the event of unanimous consensus between experts, and it was the judge or kadi who had to use that source. This action was not allowed for the ordinary or 'pedissequo' judge *(muqallid)*, who did not have the authority to directly interpret the Koran and the Sunnah.

The expert in law, *muǧtahid*, had to refer back to the most relevant doctrinal criterion amongst the members of his *maḍhab*, and, in this case, notoriety was considered a reason for reliability. Consequently, all opinions were reinforced by the experience and knowledge of other experts that legitimized the behavior to be followed. The legal foundation, therefore, lies in the wisdom of many people and not in a singular or individual opinion *(sadd)*. Additionally, at this level, the value of what is related to the community, the value of the opinion held and mutually agreed upon by experts, strengthens the nature of the Islamic community. Once the kadi, in his mission to impart proper justice, has reflected on the informed legal opinions and the grounded answers, and carefully pondering all the causes and motivations, it was possible for him to adopt an impartial resolution. Nevertheless, it was possible to count on the advice of experts in *fiqh*, the legal advisers *(mufti)*, whose task consisted of indicating the most suitable approach in alignment with doctrine and the law; but it still remained a suggestion, which is why the kadi finally had to make a decision without being coerced or influenced by whoever had advised him. This degree of discretion stands out as one of the most important characteristics within

67 Koran 4, 61, 68, and 79.

the framework of Islamic – and also Andalusi – jurisdiction. In fact, there were many occasions on which a resolution was made based upon a personal decision, according to what the kadi considered more appropriate for the case being judged, as was recorded by Ibn Sahl in al-Andalus.[68]

Even the *muqallid,* the follower of the doctrine, however, had to resolve cases or conflicts when delaying a resolution might result in damages or stop the utilization of water effectively immediately, utilizing case law as a reference. In this regard, it should be highlighted that the urgency required to find a resolution, as well as the observance of specific and accurate deadlines, helped to reduce the risk of water deprivation and the risk of spillage and damages that could make water un-drinkable.

This legal basis allows us to better understand the meticulousness applied to the settlement of cases where divergences existed, and which were resolved taking into account the spatial context where they took place. Legal sources provide some examples that can help us understand the scope of the Andalusi water regime.

4.1 The purpose of proportions and divisions of the 'right of use' of water

Water utilization and enjoyment by community members was possible thanks to the institution of *qisma*, which determined the division of water though turn taking or proportional division of time in which one would receive water; this is the first criteria for a proportional division of the 'right of use' for water. Another criterion for the use of water is the water needs of the user. The enjoyment time specified in these matters is expressed by means of the word *zamān*; according to Ḫalīl b. Isḥāq, "no possibility whatsoever exists to determine that time," due to the fact that the word *zamān* (from the root *z-m-n*), means enjoyment "over time." [69] He, thus, contributes to the lack of determination of the time *a priori*, depending on one's needs and on the utility expected to be brought about via the water usage.

Nevertheless, the *qisma* foresees the assignment of the taking of turns and the use of specific durations of water access, which is recognized in the expression *fī zamān*, thus, making it possible to fix terms or periods of use and enjoyment 'over time.' It is this last expression that justifies the assignment of timeframes measured by minutes, hours, or days, at least with regards to the use of water for production and human consumption purposes.

Another case which reinforces the principle of the 'right to use' for water for everybody according to the relevant quotas and proportions corresponding to the lot of land they hold or are associated with, is the case in which there was evidence of a reduction in that irrigation quota, *naṣīb saqy*. This compromised the farming yield and, consequently, the benefits for the people who worked and lived off of that production.[70] The decrease of water, *nuqṣān al-mā,* was nothing but a variation corresponding to the conditions of production established in the contract. This is an essential aspect if we bear in mind that the determination of the quotas or proportion of water to which the lessor and the lessee were entitled depended on that production. Furthermore, the altering of those proportions influences the amount owed as *zakāt*[71] or compulsory alms. In this sense, the scope of the loss could be estimated by evaluating the value of the products produced with irrigation on the market, or making a calculation based upon the number of months of the

68 Ibn Sahl 1978, 1084, 1088; Al-Nuaymi 1992, 1223, 1228.
69 Martínez Almira 1999, 80.
70 Ibn Sahl 1978, 1088; Al-Nuaymi 1992, 1228; Gebir 1853, 154.
71 Maíllo Salgado 2005, 470–472.

year when the reduction of water occurred, taking into consideration that summer would be the most productive period, and that a lack of water during that time of year meant a loss of a greater value, compared to the loss that would have taken place in the remaining months. However, in this same regard, Andalusi doctrine assessed the losses derived from a lack of water according to the characteristics of the products grown through irrigation, establishing one third as the minimum amount that one could claim for the damage suffered in the affected area, especially in the case of edible roots.

Another example that explains the universal right to water that existed was studied by Muḥammad b. ʾIyād. When asked about the transfer of an irrigation ditch against a landowner's wishes, the jurist from Ceuta answered that despite the practice *(ʿamal)* followed in accordance with the provisions made by ʾUmar b. al-Jaṭṭāb, according to his ruling against Muḥammad b. Maslama, such a transfer was possible under specific conditions.[72] This position contradicted that of Mudawwana, whose opinion was shared by ʾIsa b. Dinar and Abū Ḥanīfa, as opposed to Mālik, who did not share their opinion and did not implement the custom of transferring an irrigation ditch against a landowner's wishes.[73] The Andalusi practice of making this transfer can be attributed to Ziyād b. ʾAbd al-Raḥmān al-Andalusī (Šabṯūn).[74] Secondly, another possibility existed to transfer a watercourse, as long as it was officially recorded that the landowner would at no time claim ownership over the land, the claimant was not entitled to the land, and thirdly, that the land had come to be the claimant's simply because he worked it.

The utility brought about by usage of water and the benefit deriving from it had a special meaning for the contractors of a lease for irrigation,[75] the period of validity for the contract being subordinated to the terms the different parties agreed to, and a timeframe that fit with Muslims' uses and traditions. Sometimes, the irrigation, *musāqa*, referred to the word *muḍḍa'*, the meaning of which conveyed the idea of a short duration, a short term (*kā al-yawn*[76]) in the words of Ḫalīl b. Isḥāq. These terms, could not be extended for too long *(mā lam takzūr hidd(an)bi-lā ḥadd(in))* without justification, as per the lease contracts referred to by Isḥāq.[77] During these terms, the *musāqī'* had the obligation to dig, work, and fertilize the land; to irrigate it and clean it; and see to it that the land was looked after until the maturation of the fruits *(ǧidād)*.

Attention was also paid to the relevance of time when it came to the 'right of use' and benefit derived from the utilization of water for productive purposes, optimizing resources. We will, therefore, look at the case of an irrigation contract, *musāqāh*, on a land with fruits that could be sold, a practice allowed by the Tunisian Saḥnun (d. 854).[78] The *musāqāh* contract covered the irrigation of lands in which there were trees, vineyards, grains, cucurbitaceae, and some plants such as rosebushes and cotton, in short, periodic production plants with fruits that were subject to distribution; contracts on perennial plants were banned. The business object was by no means water, which, as explained above, could not be the object of trade;[79] instead, it comprised the tasks and activities required to produce the sought after fruits. Therefore, it was feasible to pay a price, investing in infrastructure and financing the work of the farmer and the people needed to make the land productive: the agricultural implements and hydrological infrastructures, draught animals to obtain water from irrigation ditches, and also workers to carry the water that was taken out of waterwheels and carried to the planted land. If one of these

72 Ibn Rusd 2000, XV, 381-399.
73 Al-Māwardī 2006, 195-197.
74 Ibn Rusd 2000, XV, 401-432.
75 Montero Muñoz 2009, 284.
76 Isḥāq 1900, 151.
77 Isḥāq 1900, 201.
78 Ibn al-ʾAṭṭār 2000, 30, 195–199; Ibn al-ʾAṭṭār 1983, 85–91.
79 Montero Muñoz 2009, 292.

necessary elements failed or was lost, the farmer or contractor had to replace it, since he pledged to do so in the irrigation contract. The payment received was intended to produce a benefit; in other words, the water was the 'good' that, together with the farm laborer's work, made the contract perfect.[80]

4.2 They all bear responsibility for water

According to Andalusi water customs *(urf)*, all the 'owners' of an irrigation ditch or canal had the obligation to work on it and maintain it, since this was the main resource for the land that they were farming, and for drinking and drainage, both in land that was sown and in land that was not. However, the problem arose when an owner did not sow his country estate and rejected the responsibility that fell upon him regarding the maintenance of the irrigation ditch or canal. In view of their refusal, the Mālikī doctrine clarified that, if the utility of the irrigation ditch only benefited those whose land was sown, the costs incurred during that period had to be assumed by the people who obtained a yield from it. Instead, if the flow of the water through an irrigation ditch benefited all those who had built the ditch through a diversion of the river, the access to water for new users obliged them to pay a part of the maintenance bill – even though the proportion might have been different from the one corresponding to the initial owners who had farmed their piece of land in the past, insofar as they had both a present and a future profit. There was no reason for those who began production tasks in an intermittent manner to assume the same costs, since theirs was a future profit and did not mean immediate usage of water. The reason for this difference lies in the conditioning and vegetation-clearing tasks that the owners of the irrigation ditch were obliged to carry out, not only for their own benefit but also to provide surplus water to whoever requested it, based upon need. New farmers who would use the water for irrigation were not completely exempt because even if they did not benefit from water use at the present, there was a future expectation because they might eventually enjoy the use of that water; therefore, they had to assume the cost for being able to have water at their disposal, accessible at any time.

Consequently, and in keeping with another case presented before experts in Andalusi law, the responsibility for the maintenance of infrastructure was assumed by the people directly involved in water use and enjoyment. This situation raised concerns about who assumed the maintenance costs and how they did so, foreseeing damages in pieces of infrastructure and general water distribution services. This need was met with the concept of proportional quotas, which became a requirement for users, since it was the only possible way to cope with any unforeseen events that might have occurred over time. Here is another element that characterizes the water supply system in Andalusi law and that survived, without interruption, in the Christian legislation that was drawn up shortly after the conquest: the monetary contribution had to be proportional to the utility brought about by the water for each person, taking as a reference, pursuant to Andalusi custom, the amount of water used for the land that each person owned. The delivery of that contribution was common to all users.

An assumption of monetary responsibility that was in keeping with the fair, equitable allocation between the beneficiaries, according to criteria of proportion, utility, and elegance or convenience for everybody's interests.

Along these same argumentative lines, regarding time and utility, the position of the Andalusi doctrine stands out, which had its most important representative in this field, the Cordovan ʾĀṣīm. He specified a period of ten years as the legal maximum in which one

80 Ibn al-ʾAṭṭār 2000, 30, 195–199; Ibn al-ʾAṭṭār 1983, 85–91.

could undertake a claim against non-relatives, and of forty years in the case of relatives,[81] in relation to immovable property. The former statute of limitations was considered long. The passage of time, a fair deed, and peaceful possession were the elements that a judge had to take into account when the recognition of a right was demanded before the court.[82] In fact, according to Andalusi doctrine, the water user had to expose the doubts that arose in relation to the right to a fixed, specified time for access to the resource shared by everyone before the experts in this field *(muqallid)*.

Something similar was applied to the people who decided to use the water retained in a dam or reservoir. The same as for irrigation ditches, ownership corresponded to whoever had built the infrastructure, generally those who used water for productive purposes. In the event of a dam breach, an agreement would be reached to rebuild it, with everyone paying for the reconstruction, with the cost divided and financed by the users in proportion to their use. However, if the dam broke in a particular place, the repairs had to be made by the person affected by the damage; it was only possible to demand the repair by all co-owners when they all contributed equally to the costs. Nevertheless, once a dam was repaired, those involved in the use of its water could reach an agreement regarding the joint assumption of responsibilities in case there was a breach or collapse; in this case, they took into account each co-owner's allocated part, which was equivalent to that of the person negatively affected by the breach in terms of use and enjoyment time. This solution was seen by the doctrine as the most 'elegant' or polite one. A criterion which was also applied to the collapse or break of an aqueduct, with the cost of the repair based upon the utility obtained by each of the beneficiaries and not according to the estimated value of the goods damaged or destroyed by the accident; the reconstruction was made at the expense of everyone, and when reluctance or discrepancies arose, the doctrine supported resorting to conciliation and reciprocal concessions between the co-owners.[83]

All of these examples and cases provide evidence of monitoring activities; acts and actions that required the existence of supervision and surveillance bodies, which were undertaken by the users themselves. There were always several officials or managers in charge of ensuring the correct maintenance and state of the water flow for the benefit of the country estates and their owners on an individual basis. These officers and managers had to assume specific functions laid down by Andalusi law.

It is important to note that maintaining ditches and channels that were clean of undergrowth and rubbish was a responsibility that fell upon the people who used the ditches and channels; in this sense, *al-Mi'yār* establishes and defines the responsibility corresponding to those individuals who must assume the expenses associated with the repairs or improvements of the ditches and channels because they use the infrastructure through which the water flows.[84] In this case, the obligation was equally binding on all users, regardless of the stretch where a break had taken place or that needed to be repaired; this was regarded as the most elegant solution for every user.

A special category was formed by the owners of irrigation ditches and of the latrines that were located in the river and benefited from the deviated water, respectively. The same holds true for the people who lived on the riverbanks and benefited from the water flow. As for the urban context, those who needed water to wash the streets to remove rubbish and dirt, diverting the torrents and rainwater that reached their houses and that they even transported so that, once served, they could deviate it again towards the river. Finally, the irrigators or *aš-šufat* and those who owned cattle, needed troughs.

81 Ibn ʾAṣim 1882–1893, 665.
82 Gebir 1853, 9.
83 Al-Wanšarīsī 1983, 8. 30.
84 Al-Wanšarīsī 1983, 8. 30.

Most significantly, part of the doctrine reacted to the numerous consultations, arguing that none of these users – the owners of irrigation ditches, those who owned latrines, those living on riverbanks, city dwellers, and irrigators – were obliged to clean the river or the public watercourses so that water could be maintained and its volume of flow increased. Each one of the parties could make use of – utilize – this river as appropriate, no matter the condition that the river was in.[85] This approach placed the responsibility for the maintenance of the watercourse and its volume of flow upon the competent authority responsible for water management and distribution; nevertheless, in this case, the authority to which the law referred needed to be specified, since users were members of a community – a concept endowed with special significance – and they all jointly complied with their obligations, including water-related matters. The transfer of such responsibility and the assumption of the main role with regard to cleaning and conservation corresponded to the community of users to which they all belonged. This makes one think about how and when infrastructure maintenance was financed.

5 Observance of the 'right to use' for water and protection against aquifer contamination and spillage

Another context where the water utility acquires particular relevance is when it comes to the maintenance of resources and infrastructures at the service points of water; the Islamic water regime paid special attention to the effective enforcement of the law, with the aim of guaranteeing the use of infrastructure and devices designed to supply water at any time and under any circumstances. The right to water equally comprised the actions meant to protect and safeguard the interests created from the existing water and to optimize resources.

In this sense, the law defined the actions that had to be undertaken, *da´wa* (defined by Maíllo as an "action in justice, claim, report"[86]), by means of explicit claims (*talab*[87]) related to an object. The report (*ablāğ*[88]) is a document that informed the competent authority for water management about any crimes or misdemeanors committed, and the 'action in justice' was the right to appear before a judge or a court to request the protection of a right or an interest, a competence derived from a subjective right. In view of all these legal meanings, the term in question exclusively refers to the pretense or claim formulated during the legal process; however, claims could not refer to water as such, but to the deprivation of its utilization or the impediments to access to it. It was the right of every community member; water could not be denied to anybody. It was precisely this right that the law protected, providing the legal means to claim it or request it *(idda´a)*. Therefore, the actions on which the claim and complaints associated with the misappropriated right could materialize, including the reduction of the assigned water quota; the deprivation of water or the refusal to supply it in times of need; and the deviation of the watercourse, causing damages and a cessation of benefits. In all these cases, the possibility existed to undertake making a complaint, *da´wa*.

Furthermore, non-compliance with the obligation both to assign water and to favor access to it was grounds for demanding responsibility from whoever caused the problem. In matters of risk, the responsibility fell upon the land worker *(al-'amil)* who maintained the infrastructure in perfect condition, among other functions, so the water supply could not damage the properties of the neighbors. They could also be held responsible for

85 Al-Wanšarīsī 1983, 8. 13–14.
86 Maíllo Salgado 2005, 65; Corriente 1977, 248.
87 Corriente 1988, 393–394.
88 Corriente 1988, 396.

the abandonment of the country estate and water supply infrastructure, as not meeting these obligations would negatively affect the community's interests. These individuals, therefore, had to assume the expenses derived from completing the harvest once the established term had expired.

Whatever actions were initiated in defense of water were based on the interest over the object subject to protection: water. Once again, the problem focused on the value of the liquid element or over the necessary enabling mechanisms to benefit from water. The claim of an undermined or misappropriated right could only refer to a 'good' that could be assessed, that is, something that had an 'intrinsic value'. It was already explained above that, by definition, water could not be subject to sale and purchase; hence, under this premise, the claim for water, being an object *('ġaraḍ ṣaḥīḥ')*, would not be feasible. To which must be added that claims that referred to objects with a negligible value – a grain of wheat, for instance – were also not feasible under Islamic law. Nevertheless, Mālikī law considered it legitimate to undertake corrective actions when the aim was to defend the interests of a person with respect to something that belonged to them or to which they were entitled. Even though no exclusive right could be exercised over it, 'right to use' of water did constitute a fundamental right that was necessary for every individual. Thus, in this case, Abū ʾUbayd Ibn Sallām argued that, with regard to water, the protection right could only be applied to three things: wells, horse reins, and the community's meeting place.[89] In relation to wells, he specified that such protection referred in particular to the area surrounding such a space, to protect the rights of the people who went there to revitalize an infertile or barren land and, by extension, the pastures for their animals.[90]

The right to claim what one was due, in water-related matters, was governed by the principle of equality before the law regardless of the community the claimants belonged to;[91] a fact that affected Muslims and non-Muslims alike when they appeared before the kadi to claim a right orally. The regular practice was to visit the house of the kadi or the mosque, which was a practice from the early years of Andalusi law that remained commonplace amongst the Mudejars in Castile until the 14th century.[92] The complaint had to be made in person or through an intermediary (*wakīl* or *wakīl al-hism*) who was compensated. The law, in this matter, did not distinguish between men and women, both could claim their rights except for those who were forbidden to appear in public; this justified why the action of the latter before the judge was undertaken through a legal representative.[93] The Andalusi water law referred to different cases where the intermediary between the person who used water for irrigation and the judge was the *ṣaḥīb as-saqiyya*, the person responsible for the maintenance of ditches.

After the summons, the failure of any of the defendants to appear – considered absent or *ga'ib* – did not prevent the trial from continuing by default, if it had to do with a claim for damages related to goods or if it had to do with blood crimes, *ḥudūd.*[94] Abū Ḥanīfa pointed out that, in the course of the trial, the judge could decide to admit the testimonies of both believers and non-believers, even though the opinion of a Mālik was different from that of al-Šāfiʾī.[95] In al-Andalus, after the conquest, no distinctions were made on the 'right of direct actions' or complaints for the 'right of use' of water for Christians, as occurred in 1320 in Andilla and Cheste in the Kingdom of Valence.[96]

89 Ibn Sallām 2003, 285.
90 Ibn Sallām 2003, 285.
91 Ibn Sahl 1978, 1084, 1093; Al-Nuaymi 1992, 1223, 1232.
92 Ibn Sahl 1978, 1047; Al-Nuaymi 1992, 1163; Gebir 1853, 366.
93 Ibn ʾAṣim 1882–1893, 227 and 880.
94 Anas 1905 [1323], 5.137/8, 16. 85.
95 Al-Māwardī 2006, 195.
96 Febrer Romaguera 1991, 213–217.

According to Ḫalīl, the judge was obliged to treat all the parties appearing before him equally, regardless of their beliefs, an opinion that was debated amongst other scholars.[97] Unlike what happens in other legal systems, Islamic law does not allow someone to be forced to appear, since this is a personal and voluntary right, at least amongst the Ḥanafís; whereas for the Mālikis, individuals were allowed to undertake actions against others with the objective to force them to expose their motivations or the right that they could use against the former, by means of what was known as 'decisive action' *(qatān-niza)*.[98] The interested parties present had to sit in front of the judge, take the right to speak when it corresponded to them, and the judge had to listen to them all with the same degree of attention. Once the facts and the legal foundations applicable to them were known, the judge dealt with them, maintaining that same impartiality.[99]

The first responsibility that fell upon the judge was to urge the parties to reach an agreement or a conciliation, irrespective of if the parties were individuals of recognized prestige or relatives confronting one another; or when a risk existed that the dispute could last for a long time, thus resulting in enmities or serious conflicts; or when it proved difficult to achieve a fair, equitable solution due to the seriousness or complexity of the issue.[100] The only possible exception to this rule would be the evident damage caused and the evident right of one of the parties to request an effective legal protection. In the case at hand, water was the reason for the conflicts and disputes, but judging by the data preserved, only a limited number of the lawsuits resolved at court were not categorized as an 'agreement' or 'agreement sentence', thus, denoting the willingness to carry out mediation.[101] Conciliation or mediation, exercised by the officials in charge of allocating and collecting the contribution destined to sustain the expenses, repairs, and improvements of infrastructure, was the usual way to settle the conflicts that arose over water, as suggested by ʾAbd al-Ḫamīd Aṣ-Ṣāiğ.[102] In this case, the conciliation should have tried to ensure that all interests were satisfied under the principle of reciprocity.[103] The conflicts among irrigators after the Christian conquest were subject to the *Tribunal de las Aguas* (Water Tribunal or Tribunal of Waters), the *Juntas* (water boards), and the *Consejo de Hombres Buenos* (Council of Wise Men) and also to the jurisdiction of the community of irrigators, as described in medieval sources.[104] This reminiscence on the traditional system was based on the explanation of the persistent attitude of the lawbreaker towards the competent authority.[105]

Time played a role in favor of or against the defense of water users' rights as well. The importance of time for conciliation purposes stemmed from the fact that its proper use guaranteed profits. The timeframe to present the evidence was subject to the judge's own wisdom *(iğtihād)*.[106] It was customary for the judge to grant eight days in credit matters, then six, then four, and finally three; twenty-one days in all. When it came to real estate property and inheritance of lands benefited by water, the period was fifteen days, then eight, then four, and finally three; thirty days altogether.[107] The last three days were granted in accordance with the Koranic precept (Kor. XI, 68), based on what Salid had transmitted from the Prophet. These terms could be unified at the judge's

97 Cfr. Martínez Almira 2014, p.682.
98 Santillana 1926–1943, II, 554.
99 Isḥāq 1900, 35, No. 31; Kor. 4,41.
100 Gebir 1853, 186-187.
101 Isḥāq 1900, 35, No. 53, 62; Martínez Almira 2014.
102 Ibn Sahl 1978, 1088; Al-Nuaymi 1992, 1227.
103 Ibn Sahl 1978, 1092; Al-Nuaymi 1992, 1237
104 Valiño Arcos 2016, 7, 339-357.
105 Armengot Vilaplana 2014, 307–327; Martínez Martínez 2018, 132–179.
106 Al-Māwardī 2006, 120–122.
107 Barceló 1989, 48.

discretion, provided that the maximum timeframe always resulted from adding up the partial timeframes or periods. In this matter, the question was, how much time it would be possible to grant without prejudicing the right of the water users and consumers.[108] It was the reason, for instance, judges granted the witnesses that were too far away a period of up to three months, consistent with the Sunnah.[109]

Many water issues were resolved in a satisfactory manner among the peasants at the "foot of the garden or ditch",[110] as it happens nowadays; nevertheless, the surveillance and presence of the owners and the water marshals[111] was a guarantee for the beneficiaries. The actions brought before the kadi were only those that occurred in persistent situations or in case of intentional and evident damage. The kadi, on the other hand, could be an expert in these matters. In the case of Yaḥya b. Ma'amar, who according to al-Jušanī had his own garden being watered with water that he extracted with a crankshaft. ʾAbd al-Raḥman II was informed of al-Jušanī's experience and appointed him to a kadi, for "his virtues and scrupulous conduct",[112] according to the sovereign. It is not surprising that the expert administrators of justice in matters of water arose from the sphere in which they carried out their activity, in this context, as was the case with respect to the Cordovan kadi. It is also a fact that guaranteed one of the basic principles in the Andalusi justice system: the prompt processing of conflict resolution. In fact, the diligence in finding a resolution was not only advisable but also worthwhile for those who were interested in reaching an agreement; it helped avoid the prolongation of harmful situations that limited or impeded people's access to water and avoid the risk of spills or other substances that would make the water undrinkable, as well as situations that resulted in flooded and damaged crops or properties of any kind.

6 Conclusion and final reflection

This analysis about the 'right of use' for water, the water regime approaches that existed in al-Andalus, and the guarantees regarding the management and administration, as well the defense of interests, comes to an end at this point, with the intention of generating curiosity to explore many other aspects that may help us understand legal evolution over time.[113] The adaptation and modelling of the traditional irrigation system, taking into account demands other than those imposed by the environment and the climate on the river, plants, soil, and surrounding basins can only be understood based upon a strong knowledge of the system that underpinned this productive model that was developed to a greater or lesser extent in the 8th century.

This paper aims to be a connecting link in the knowledge chain provided by academics, researchers, irrigators, and user communities that should be preserved and taken care of as part of the legacy of generations of people over twelve centuries. This water regime was questioned and contested by Spanish lawyers in the 19th century under the influence of legal professionals; it was a period of territorial and structural reforms promoted by lawyers that were concerned with the development of positive law, distrustful of customary water laws that had reigned under the Spanish system. This is the right moment to try to understand the background of water usage and management in the Iberian Peninsula, in order to help conserve rural and peri-urban irrigated environments.

108 Bruhnes 1902, 393.
109 Barceló 1989, 48–49.
110 Local saying in the Vega Baja of Segura River.
111 Water marshals are agents or judges, local officers, in charge of water. Administratively, they are between the Kadi and the community of users, and they are usually a member of the community of irrigators.
112 Al-Joxani 2005, 87, 107.
113 Zambrano Moral 2011, 37. 597–650.

Scholars in many different forums at the international level insist on undertaking specific actions focused on a permanent, universal, and intergenerational education on the use of water; an educational model that takes into consideration the historical and legal memory. In this case, it has become impossible to comprehend how the politicians cannot understand the future of an integrated approach to water resources management by looking at the water regime in force over centuries in territories irrigated by rivers under variable weather conditions. It is time to give the floor to the people who learned through the generations that it is possible to share water even when it is scarce, that it is possible to use water supplies facilitating access through waterworks in good conditions, and that it is possible to reach agreements that take into account the present needs without putting the future at risk. There are plenty of possibilities for action in a community that is aware of the benefits of solidarity. [114]

114 Dagnino Pastore et al. 2010, 33.

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Maria Magdalena Martínez Almir
is a Professor of Legal History at the University of Alicante in Spain and holds membership in several research projects (R+D). She is also a supervisor and dissertation director for Phd students focused on efficient water management. The focus of her research is on the sources and institutions of the al-Andalus Islamic legal system, the legal status of Muslims during the 8-17th centuries, and water law. Martínez is a member of the International Society for Islamic Legal Studies (ISILS), the International Commission for the History of Representative and Parliamentary Institutions, the Instituto Internacional de Historia del Derecho Indiano, the Societé d'Histoire du Droit (SHD), the Asociación Española de Medievalistas (AEM), and the Sociedad Española de Estudios Árabes (SEEA). She completed a Dr. law in Alicante, 1995; a Dr. phil in Alicante, 2016; and a Habilitation in Alicante, 2012.

Prof. Dr. Maria Magdalena Martínez Almira
Área de Historia del Derecho
Departamento de Ciencias Histórico-Jurídicas
Faculty of Law
Universidad de Alicante
03690 San Vicente del Raspeig- Alicante, Spain

E-Mail: mm.martinez@ua.es