

The struggle of traditional irrigators to control the Turia River (Spain, 1850-1951). A failure of collective action in river basin management.

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Abstract

This paper analyses the evolution of the institutions involved in the management of irrigation in the Turia River basin in the period 1850-1951. During one century, the traditional water users' associations struggled to control the river regulation processes and to create higher institutions to manage the river basin, finally achieving the formal creation of a basin agency with the support of the State. After the war, the Franco regime executed a complete reform of this institutional framework, leading to the organization of a unique powerful hydraulic bureaucracy that left the irrigation institutions out of the decision making process at the river basin level. The analysis of this study case shows the opportunities and constraints faced by small institutions pursuing the organization of higher institutions for the collective management of common pool resources.

KEY WORDS

Irrigation, collective action, river basin, water users' associations, hydraulic bureaucracies

INTRODUCTION

The Spanish collective institutions for irrigation management have become a reiterated reference in the study of common pool resources. The work of Maass and Anderson (1970) on the irrigation water users' associations (*sindicatos de riego* or *comunidades de regantes*, ICs) of Murcia, Alicante and Valencia, was used by Ostrom (1990) to support her theory on the governance of the commons. The Spanish ICs were a successful example of collective institutions which had shown a remarkably stability through very different historical contexts. This work, although revised (Romero & Mateu, 1990; Peris 1997; Garrido, 2011), is still a valuable example, and has

contributed to strength a National myth on local water management institutions. However, the success of Spanish irrigators in the local management of water, contrasts with an important failure in the management of this common pool resource at the basin scale.

During the second half of the ninetieth century and the first half of the twentieth century, the ICs of the large *huertas* (market gardens) of eastern Spain seek for the constitution of higher institutions to coordinate water management at the basin level. The aim of this institutional ambition, boosted in some periods by the action of the State, was to reduce the conflicts and to achieve a major level of water rights enforcement. In this paper, we focus on the Turia River, whose flow provides water to the *Huerta de Valencia* and other traditional irrigated areas.

This paper has been produced after a prolonged archival research, involving documents from the private archives of the water users' associations of Júcar and Turia rivers, from the legacy of the lawyer Vicente Giner (guarded in the *Biblioteca Valenciana*) and governmental and administrative documents guarded in several public archives (*Confederación Hidrográfica del Júcar, Diputación de Valencia*).

The results of the archival research have contributed to reconstruct the process of the creation of nested institutions to manage water at the river basin level in Spain. This historical process provides an opportunity to correct some clichés on the characterization of these institutions in Spain, due to the fact that the small Mediterranean rivers, where the water users' associations were powerful institutions, seem to follow a different institutional path from the Ebro River or the Atlantic basins, where there was a lower dynamism of the stakeholders. Moreover, the long struggle of irrigation associations of the Turia River to create institutions for basin management provides an interesting framework for the analysis of the opportunities and constraints faced by small institutions pursuing the organization of higher institutions for the management of common pool resources. This study case also contributes to underline the impact of the hydraulic bureaucracies in the breakup of the collective-action on water resources management.

REGIONAL, HISTORICAL AND METHODOLOGICAL FRAMEWORK

The Turia river basin is placed in eastern Spain. Since the Medieval period, seven ICs managed the irrigation of the seven channels providing the river water to the *huerta* (market garden), over the wide floodplain surrounding the city of Valencia (channels or *acequias* of Quart, Mislata, Favara, Rovella, Tormos, Rascanya and Mestalla). Conflicts resolution in this area was organised under a common court, the *Tribunal de las Aguas*. The northern area beside these lands was irrigated by the royal channel of the *Acequia de Moncada*. The eight channels had a privileged position in the distribution of water rights, bestowed by the monarchy to protect the strategic value of the *Huerta de Valencia*. Upstream this area, some villages, known as the *Pueblos Castillo*, used the Turia water to irrigate the river valley. Several operational procedures were designed in the medieval period to coordinate water distribution among all these collective institutions (Foster, 1933; Glick, 1969; Burriel, 1971). At the Upper Turia basin, all the villages located beside the river had also their own small *huerta* (Figure 1).

Throughout the ninetieth century, the expansion of irrigation and the change to a more water demanding crop pattern in the Huerta de Valencia increased the pressure on water resources at the Turia basin. Moreover, new water uses emerged, because of the urban and industrial moderated but prolonged growth. As a result of these increasing pressures, water conflicts arose frequently. At the local scale, the ICs of the *acequias* had institutional mechanisms to solve these problems, to achieve agreements, to enforce their own ordinances and, when necessary, to impose sanctions. However, at the horizontal level, among the different ICs or different districts, conflicts were increasing, affecting in some occasions the public order. This situation was common to many other basins in the Mediterranean regions of Spain (Calatayud, 1993; Pérez Picazo, 1998, 2002; Ferri, 1997; Ferri & Sanchis, 2001; Calatayud, *et al.*, 2011). In every river, in the eyes of the lower channels, the enforcement of the law was insufficient, whereas the upstream users frequently considered abusive the water rights held by the downstream *acequias*. The ICs had a valuable structure and experience to manage water for irrigation at the local level, but there was a clear lack of institutional tools to solve conflicts between stakeholders at the basin scale.

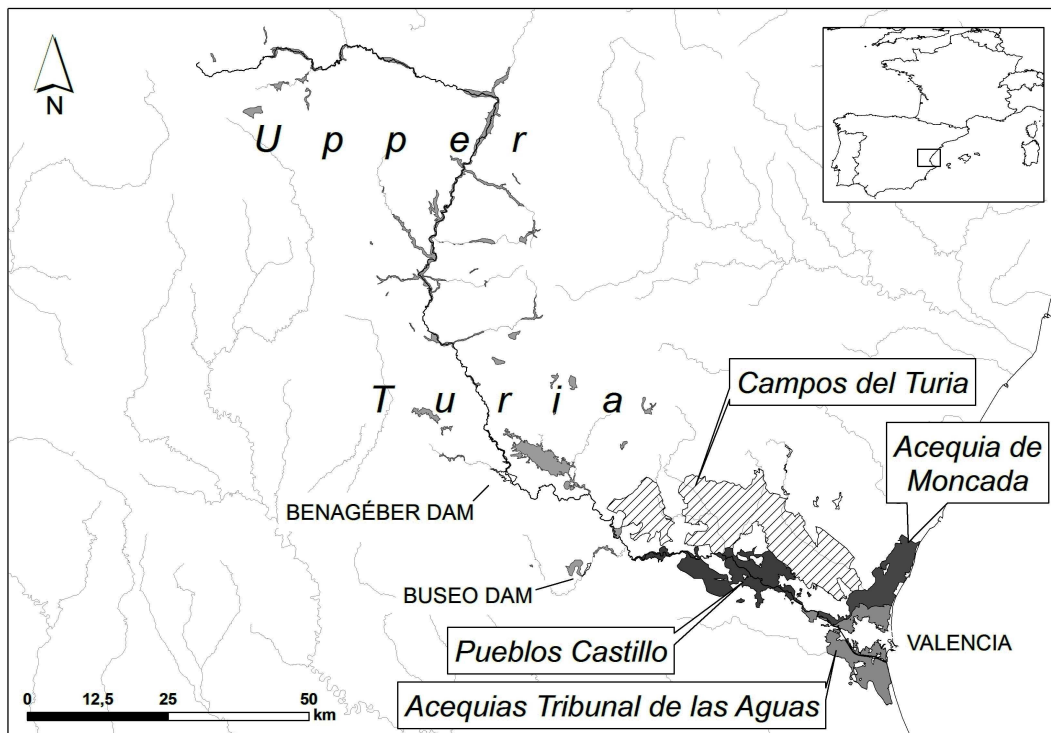


Figure 1. Location of the irrigated lands of the Turia River basin.

During the second half of the ninetieth century, the liberal administration sought for the implementation of efficient measures to reduce these conflicts, in order to maintain the oligarchic social order. The State developed a legal framework for water –Water Laws of 1866 and 1879– aimed at create institutions capable to guarantee sound management of water distribution. The *Sindicato de riego* (Irrigation Syndicate) model was created as a reference for local management and the *Sindicato Central* (Central Syndicate) for the management of large areas made up of several ICs. The activity of the provincial

governors was crucial to force the municipalities or other collective institutions holding water rights to adapt the irrigation management to this model, inspired in the old ICs of the Huerta de Valencia.

At the beginning of the twentieth century, the *Regeneracionismo*, a movement of intellectual renovation that emerged after the loss of the last colonies, placed water policies at the central axis of the economic regeneration of the nation (Ortí, 1984, 1996; Gómez Mendoza, 1992; Swyngedouw, 1999). The regulation of the peninsular rivers became a priority for the State. The first milestone in the development of this water policy was the General Plan for Irrigation Canals and Reservoirs of 1902, also known as the Gasset Plan. The construction of reservoirs in the Mediterranean basin was perceived by the traditional ICs as an opportunity to increase water resources availability but also as a risk of attracting new users.

Under the dictatorship of primo de Rivera (1923-1930) the semi-autonomous *Confederaciones Sindicales Hidrográficas* were set up, in line with the Water Act of 1879 (Swyngedouw, 1999; Molle, 2006; López-Gunn, 2009). The *Confederaciones* were designed as basin agencies controlled by users, with the technical and financial support of the State. They were a pioneer example of river basin authorities with participatory and decentralized planning and management. These institutions underwent several reformations and changes of names (*Confederaciones Sindicales Hidrográficas*, *Mancomunidades Hidrográficas*, *Confederaciones Hidrográficas*) and finally, after the Civil War (1936-1939), lost their participatory structures and were placed under the strong State control of the Franco dictatorship (1939-1975).

Throughout all this period, the ICs of the Spanish Mediterranean rivers participated actively in the design of water policies at the basin scale, with the aim at increasing water resources availability and to enforce their historical rights. The *Confederal* participatory structures provided them the opportunity to do it. However, there were important pressures and constraints that hindered the struggling of the ICs to control the river basins and to enforce their water rights.

The recent works on the study of the collective action provide a useful methodological framework for the analysis of these institutional processes on irrigation management. The basis for this approach is the known work of Ostrom (1990), which defined eight design principles illustrated by long-enduring common-pool resources institutions. These principles were a useful tool for the analyses of very different institutional performances, which have been applied to assess historical experiences and to support the design of new institutional architectures. Other authors have improved this analytical framework. Wade (1994) focused on the study of commonly managed irrigation systems in India, detected fourteen conditions in facilitating successful management of the common-pool resources. Baland and Plateau (1999) presented a synthetic review of a large number of studies on the commons, underlining some new variables affecting these institutions. Finally, Agrawal (2001; 2003) has combined the contribution of the previous authors to define the critical enabling conditions for sustainability on the common-pool resources institutions. Agrawal works (2001; 2003) incorporated some more new factors in a rigorous methodological analysis and defined four sets of variables: (a) characteristics of resources, (b) nature of groups that depend on resources, (c) particulars of institutional regimes through which resources are managed, and (d) the nature of the relationship between a group and external forces.

This methodological background has been used to identify the factors that weakened or strengthened the evolution of the collective institutions of irrigation management at basin scale in the Turia case study.

THE TURIA RIVER BASIN. COLLECTIVE-ACTION AND STATE INTERVENTION.

The different social and political frameworks and the contrasted strategies followed by the traditional irrigators require dividing the description of this long study period in three stages. The first, focused on the pioneer initiatives to constitute higher institutions for irrigation management. The second summarizes the struggle to control the river regulation processes and to adapt the ICs participation to the *Confederal* structures (1902-1939). The third, describes the dismantling of the participatory structures under the Franco regime.

THE FAILED *SINDICATO GENERAL DE RIEGOS DEL TURIA* (1851-1902).

Along the 19th century the Turia River underwent a growing pressure on water resources, mainly caused by the expansion of the irrigated lands in the Huerta de Valencia. In light of the lack of water resources, the implementation of traditional operative procedures for drought and scarcity became more frequent during the summer periods. In this context, the number of irrigation turns was reduced and some distribution practices establishing priorities among crops, to save trees and high productive crops, were also frequently used (Maass-Anderson, 1978; Burriel, 1971; Calatayud *et al.* 2011). As a result of this, conflicts among farmers and among ICs increased.

In October of 1950, the Provincial Governor, Melchor Ordóñez, decided to boost the creation of new organization to control irrigation conflicts, an organization which should be made up of all the ICs using water from the Turia River¹. Ordóñez, and the liberal elites of the period, had assumed the thesis of Jaubert de Passa (1823). The French agronomist, after visiting Valencia between 1816 and 1819, had concluded that the irrigation “communities” of the Huerta de Valencia where the most efficient institutional way to reduce water conflicts.

The project was positively received by the ICs of the Huerta de Valencia and by the technical and political elites of the region. A few months later, a commission was created in order to define the structure and regulations of the new organization. Members of the administration, the ICs and the *Real Sociedad Económica de Amigos del País*² participated in the commission. In parallel, an expedition made up of four prestigious architects and engineers was sent to measure all the river intakes and to compare the irrigation intakes with the infrastructures inventoried and measured in 1617 by the expert Melchor Sisternes. Their final goal was to propose solutions for the scarcity of water resources in the Huerta de Valencia.

¹ Archive of the *Biblioteca Valenciana*, Legacy of the Lawyer Vicente Giner, Box 7.

² The *Real Sociedad Económica de Amigos del País* (literally, Royal Economic Society of the Friends of the Country) is a civil institution created in several cities of Spain (also in Switzerland and Ireland) during the Enlightenment, in order to promote social and economical development. The liberal elites joined these associations, which achieved great prestige along the 19th century.

The commission documents stated the principles and goals that had to guide the creation of the new institution. The central idea was to consider the river as a canal, in order to bring to the new institution the structure and management principles of the successful local ICs, now included as nested organizations. “The Turia River” said the commission “is just a great canal from which are derived the main irrigation canals. If every irrigation canal has its own Syndicate... Which is the objection to creating one for the canal mother of the rest of canals?”³. The commission also argued that in all the irrigation canals, in order to guarantee the collective rights, the organizations did not allow individual farmers to take as much water as they wanted to, consequently, at the river scale, the same principles should be adopted, to ensure “the association of efforts of all interested farmers to avoid conflicts”⁴.

The commission report admitted the existence of laws and regulations to control water withdrawals from the river, but detected an important lack of law enforcement. The new collective organization was seen as the necessary “regime to give unity, strength and speed to the administration”⁵. Thus, the commission stated that the intervention of the higher or external authorities should be reduced to a minimum expression. In fact, the creation of the institution, financed by all the users, should contribute to reduce the duties of the Provincial administration.

In January of 1953 the government passed a royal decree creating the Sindicato General de Riegos del Río Turia (SGRT). This institution met the demands of the irrigators of the Huerta de Valencia, but it was not positively perceived by the rest of the river users. The reason of this disagreement was the composition of the government board of the SGRT. The Huerta de Valencia had three representatives (two from the *Tribunal de las Aguas* canals and one from the *Acequia de Moncada*) whereas the rest of the river SRs had just two (one from the *Pueblos Castillo* and one from the whole middle and high basin). This structure reflected the weight of the irrigated lands and water rights, but it was not territorially balanced. The district of Valencia had the control of the institution.

The scarce representation obtained discouraged the Upper Turia water users’ to participate actively in the institution. In these conditions, their financial contribution to the SGRT was also perceived as an unfair imposition. For these reasons, in order to ensure the involvement of all the water users of the Turia River, the Provincial authorities considered compulsory the participation in the institution. This fact, stipulated in the regulations of the SGRT, caused the protests of some municipalities of the Upper Turia. In 1957, some municipalities wanted to abandon the institution, but the authorities forced them to remain at the organization and to maintain their financial contribution.

In 1866 the government passed the first national Water Law. This document included specific regulations for the creation of *irrigation syndicates* and *central syndicates*. The regulations for these organizations were inspired in the traditional structure of the traditional *comunidades de regantes* of the Huerta de Valencia, where the water users’ associations were institutions independent from the municipal authorities. However, the new law didn’t coincide exactly with the old regulations of the water users’ associations

³ Idem.

⁴ Idem.

⁵ Idem.

of the Huerta. As a result of this, several ordinances had to be adapted to the new legal framework.

The regulations of the SGRT had to be adapted to the new legal framework for water and a commission was created in 1869 to reorganize the SGRT as a *central syndicate*. This situation of temporal loophole was used for the rebel municipalities to question the legality of the SGRT. When the commission started working, the representatives of the channels of the Pueblos Castillo decided to abandon the SGRT and to create a Central Syndicate of the Pueblos Castillo. The organizations of the Upper Turia and the Acequia de Moncada joined the rebellion and refused to designate their representatives in the institution. All of them argued that the SGRT had lost the legality. The governor refused to dissolve the institution and forced them to join again the SGRT, despite the fact that the new law permitted the creation of several central syndicates in the same river basin.

Most of the villages of the Upper Turia did not perceive any benefit from the SGRT. Consequently, some municipalities searched other strategies to abandon the institution or, at least, to reduce their financial contribution. In 1870, the municipalities of Chelva, Loriguilla, Calles and Vallanca, whose lands were irrigated with groundwater or water from small tributaries, tried to quit the organization, arguing that they were not using water from the Turia River. The SGRT inspector, Vicente Alcaine, produced a report explaining that all the tributaries providing water to the Turia River were inseparable parts of the basin and then, of the SGRT. Other municipalities, such as Torrebaja, Ademuz or Castielfabib, tried to reduce their financial contribution by proving that they were using less water than the amount officially registered. Even one of the associations of the Huerta de Valencia, the Acequia de Tormos, intended to quit the SGRT, causing a commotion among the rest of the Huerta communities. In May of 1872, the governor refused all these appeals and forced them to join again the SGRT. In 1875 the same municipalities tried again to abandon the institution and, after the governor reaction, they applied unsuccessfully to the State Council, the highest legal institution.

The opposition of the irrigation associations of the Upper Turia contrasts with the interest of the last users of the river. The representatives of the Acequia de Rovella, the last canal to take water from the river and the most affected by the illegal withdrawals, made a significant appeal in 1875. They ask the SGRT to guard the keys of all the river intakes, in order to control all the distribution tasks.

The resistance of the Upper Turia, the *Pueblos Castillo* and the *Acequia de Moncada* lead the institution to a critical economic situation. In 1977, the SGRT had to negotiate new deadlines to settle debts dating back to 1869. A feeling of disappointment and failure spread among the SGRT most committed members. The syndicate was in “bankrupt, if not in all their functions, at least in its moral life”⁶.

Finally, in 1880, a new regulations project was presented in order to refund the institution. Nevertheless, the initiative did not go further. Although the institution was never dissolved, the last documented meeting of the organization took place in 1883. The SGRT was, according to their government board, “defeated by the resistance of the defeated”⁷.

⁶ Archive of the *Biblioteca Valenciana*, Legacy of the Lawyer Vicente Giner, Box 6.

⁷ Idem.

RIVER REGULATION AND BASIN CONTROL (1902-1936)

During its short existence, the SGRT had tried to promote river regulation works in the Turia basin, in order to increase the available water resources. The expedition commissioned to check the river intakes in 1850 had also investigated several sites as possible dam locations. Some years later, in 1971, the government had passed the construction of a reservoir in Gestalgar, just upstream the Pueblos Castillo channel intakes. The SGRT financed several geological surveys to study the dyke construction, but the lack of funds hindered the progress of the project, designed by Vicente Alcaine.

At the end of the century, the emergence of the *Regeneracionismo* created a new political scenario. The General Plan for Irrigation Canals and Reservoirs of 1902 included the construction of two dams (Buseo and Rambla de Arquela) in two tributaries of the Turia River. The irrigators received enthusiastically these projects and agreed to contribute economically to the construction of the Buseo reservoir. The 50 percent would be invested by the Huerta de Valencia ICs and the rest would be paid by the State. The dam would be property of the ICs, which had to create a water users' association (Central Syndicate) for the management and conservation of the dam.

The *Sindicato de Riegos del Pantano del Buseo* was created in 1903, made up of the ICs of the Tribunal de las Aguas and the Acequia de Moncada. Other potential users, such as the Pueblos Castillo, were excluded from the project. The regulations of the new institution paid special attention to the reservoir discharge management, because before reaching the Huerta de Valencia, the Buseo water had to be mixed with Turia waters and to go through the Pueblos Castillo intakes without any illegal withdrawal. Moreover, the regulations included a last article to enable a potential merge between the new syndicate and the old SCRT.

The reservoir (González, 1927; López, 1988; García, 2003) was inaugurated in 1915 and the *Sindicato de Riegos del Pantano del Buseo* assumed the ownership and management of the dam. As a result of the small storage capacity of the reservoir (7.5 hm³) and the distance between the dam and the irrigated area (65 km), the effect of the new infrastructure did not significantly improve the situation of the Huerta de Valencia. Water shortages were frequent during the following summers, generating an atmosphere of enormous susceptibility. For this reason, in 1926, when the municipality of Valencia obtained an additional allocation of Turia water from the government (Royal Order of 27th of September 1926) to improve the urban water supply service, the irrigators of the Huerta de Valencia reacted angrily.

The royal order was passed to legalize the urban water extractions. However, the city withdrawals had been, during the previous years, even higher than the 25.000 m³ per year recognized by this decree. Moreover, the order did not alter any previous allocation and forced the municipality to compensate the historical appropriators if a potential lack of flow could affect them. Despite these facts, the ICs of the Huerta de Valencia conducted a campaign to cancel the royal order, because, in their opinion, no water right could be above their historical water rights.

The ICs, led by the lawyer of the *Tribunal de las Aguas* Vicente Giner Guillot, visited the minister of public works Rafael Benjumea and met the dictatorship Primo de Rivera and the king Alfonso XIII to explain their arguments. They also obtained the unanimous support of the local press, from the republican (left) *El Pueblo* to the conservative *Las Provincias*. At the end of October of 1926, the ICs organized a public assembly in Valencia and mobilised 5,000 farmers from all the Huerta. The city theatre could not accommodate such a large crowd and an improvised demonstration marched to the city bullring, where the leaders of the ICs gave several speeches. All of them asked for the cancellation of the royal order, described dramatically the recent water shortages, and underlined the social and economical value of the Huerta and the pre-eminence of their historical water rights. Moreover, Giner defended the creation, with the support of the administration, of a new higher institution capable to enforce the water law and to protect the legal appropriators of the Turia river waters.

At the beginning of 1927, as a result of the political pressure of the ICs, the major of Valencia dismissed. The government designated a new major, more sensitive to the ICs demands and the Ministry of Public Works, the municipality and the ICs negotiated an agreement. Finally, the ICs accepted to transfer temporally water to the city whereas the government passed the construction of three new dams (Conquetes, Domeño and Loriguilla) designed by the División Hidráulica del Júcar (DHJ) to guarantee water resources availability in the Huerta de Valencia.

The peace at the Huerta de Valencia remained precarious. The regional water administration (DHJ) had projected another reservoir in the Turia River, the Benagéber dam, aimed at improving the total river storage capacity and at creating a new irrigation district beside the Pueblos Castillo lands. The potential beneficiaries of this infrastructure created in 1927 the *Sindicato de Propietarios Agrícolas del Pantano de Benagéber* (SPAPB) as a lobby to press the administration. Moreover, at the end of the summer of 1928, a recently created private company for hydropower and irrigation development, *Regadíos y Energía de Valencia* (REVA), obtained a governmental license to build three reservoirs, replacing the dams designed by the DHJ. REVA would finance all the waterworks, constructing several hydropower plants and developing some new irrigated areas, including the lands of the SPAPB.

Despite the fact that the governmental license given to REVA recognised the priority of the Huerta de Valencia water rights, the Valencian ICs refused categorically the REVA project. On this occasion, the Acequia de Moncada and the Tribunal de las Aguas established an alliance with the Pueblos Castillo and the small hydropower companies working at the river, to protect their rights against the potential new users. They created a new organization, the *Junta de Defensa del Turia* (Turia Defense Board), to coordinate and to finance future negotiations and actions of protest.

One of the first actions developed by the *Junta de Defensa* was to ask Juan de la Cierva, ex-minister and dean of the Lawyers Association, for advice. At the end of 1928, De la Cierva sent a report recommending the Junta to create a *Confederación Sindical Hidrográfica* to assume the control of water management in the whole Turia basin. Immediately, Vicente Giner, who had demanded in the meeting of the bullring a similar initiative, contacted all the Turia River water users' to constitute a new basin agency, the *Confederación Sindical Hidrográfica del Turia* (CHT).

The *Confederal* institutional formula met perfectly the historical demands of the traditional irrigators. First, the CHT would give the traditional users the control of the gates of the new reservoirs. Second, the institution would have capabilities and legal support to enforce the law and to make all the users to respect the priorities established by the acquired water rights. And last but not least, the budget of the agency would be financed by the State and the users' contribution was limited to the recovery cost of the new waterworks. These facts established a legal and financial basis substantially different from the previous *Central Syndicate* formula. Consequently, under these conditions, the municipalities and hydropower companies of the Upper Turia also gave support to the initiative. More than the 75% of the water users' of the basin signed an agreement and applied formally to the government for the creation of the CHT.

The political instability (end of Primo de Rivera dictatorship, transitional Berenguer government and the second Republic constitution) paralysed the administrative progress of the initiative during two years. Throughout this period, REVA published several advertisements and illustrated articles in local newspapers, in order to disseminate the benefits of their investment. The company tried to negotiate individual agreements with the ICs and Central Syndicates, but they only obtained the support of the potential beneficiaries of Benagéber reservoir, the SPAPB. On the other hand, the members of the *Junta de Defensa* conducted an effective campaign with the support of the local newspapers; maintained regular contacts with the different and ephemeral ministers of Public Works and organized a massive demonstration with 10.000 farmers in Valencia. They also succeeded at giving a nationalist orientation to the conflict, labelling the REVA regulation project as a foreign interference, due to the participation of Belgian capital in the company.

Finally, the *Junta de Defensa* and the SPAPB achieve an agreement, with the support of the first Republican government, to construct immediately the Benagéber reservoir and to create a Central Syndicate made up of all the potential users, excluding the REVA Company. In June of 1931 a ministerial decree ordered the start of the construction – then named Blasco Ibáñez in honour to the republican writer– and the creation of a new syndicate to manage the reservoir water resources. The ICs of the benefited areas and the hydropower companies located downstream the dam created in 1932 the “Sindicato Central de Regulación del río Turia” (SCRT), according to the dispositions of the Water Law.

The functions and duties of the SCRT were not higher than the responsibilities attributed to the former SGRT. The ICs wanted to obtain the total control of the new reservoir and, consequently, applied formally to the government for the concession of new duties. Specifically, they demanded to assume the technical and administrative inspection of the construction works and the management, conservation and maintenance of the Benagéber reservoir. These demands conflicted with the interests of the technicians from the administration, particularly with the regional services of the Ministry of Public Works, in this period named *Delegación de Servicios Hidráulicos del Júcar* (DSHJ).

Nevertheless, the Ministry conferred the Syndicate these responsibilities and functions in April of 1933, through a ministerial decree that bestowed the SGRT the level of the *Confederaciones Hidrográficas* (then named *Mancomunidades Hidrográficas*). In light of the opposition expressed by the engineers of the DSHJ, the Ministry ratified the order

with a new decree, published in November of 1933. In order to avoid discrepancies among irrigators or hydropower companies, the ministerial order also forced all the river users located downstream the Benagéber dam to join the Syndicate and to agree regulations for the new institution. During the following months, the ICs and the hydropower companies discussed the articles of the new ordinances for the SCRT. It was particularly difficult to reach a consensus in two points. First, the system of representation, which finally was solved adopting the procedure used in the southern *Confederación Hidrográfica del Guadalquivir*. Second, the level of integration of the ICs in the SCRT, because some members were afraid of losing the autonomy of the local entities.

The negotiations were prolonged during two years. Throughout this period, the irrigators and hydropower companies of the neighbouring Júcar River basin achieved the constitution of the *Confederación Hidrográfica del Júcar* (1935), with the support of the State and the commitment of the engineers of the DSHJ. However, these engineers refused the attribution of the *Confederal* level to the SGRT. The cause of their opposition was the disagreement between these engineers and the Huerta de Valencia ICs, which came up from the dispute between the Huerta and the Valencia city in 1926 and was fuelled by their opposed vision of the river regulation process.

Finally, in June of 1936, the Ministry of Public Works passed the new ordinances, conferring definitively the *Confederal* level to the SCRT. The Syndicate became as legal entity, assuming functions such as the control of river regulation projects, water distribution, river surveillance and sanctioning. The irrigators, with the support of the hydropower companies, had finally achieved the constitution of a collective institution to control the river management. However, only one month later, the outbreak of the Civil War interrupted the activity of the improved SCRT.

THE INTERVENTION OF THE STATE (1939-1953)

After the war, on paper, the SCRT preserved the functions and rights acknowledged before the civil conflict. There was an ideological harmony between the elites governing the Syndicate and the new régime. Thus, the SCRT applied formally for the change of the reservoir name from *Blasco Ibáñez* to *Generalísimo* to honour the General Franco. The works at the dam were set out again.

However, at the beginning of 1940, the technocrats of the *Confederación Hidrográfica del Júcar* (CHJ) and the DSHJ took advantage of the post-war reorganization of the administration and merged both institutions, restructuring the departments and functions. The result of this process was the enlargement of the area controlled by the CHJ, which annexed several small neighbouring basins and the Turia River area. This task was led by the engineer Fausto Elío, who achieved his aspiration of joining all the territories allocated to the old DSHJ to a unique administrative structure (Mateu, 2011).

At the same time, the new régime started to build a new legal framework for water management, also based in the Regeneracionismo principles, but now strengthening the role played by the State to the detriment of users' participation. In 1942, a Ministerial Order (never published but communicated by administrative channel) suspended the

autonomy and participatory structures of the *Confederaciones Hidrográficas* and established a more strict governmental control and a technocratic structure.

In this new framework, the situation of the Turia basin was particularly complex. The SCRT legally maintained the *Confederal* level, but the CHJ had incorporated the basin to its administrative area and the participatory structures had been removed from the State administration. During one decade, this administrative overlapping and duplication remained. The SCRT did not make use of the powers granted to them to control the river basin, because most of these powers were linked to the implementation of the new reservoir. The CHJ, for its part, avoided the conflict, maintained regular contacts with the institution and focused its efforts on the construction of the Benagéber dam.

By 1951 the works at Benagéber were very advanced and the CHJ wanted to create a reservoir board (*Junta de Desembalse*) to control the management of the new dam. The existence of the SCRT was an important obstacle for the CHJ purposes. For this reason, in April of 1951, the CHJ contacted the SCRT to ask them to resign to all the rights and functions obtained during the “red or reddish” period⁸. With these words, the CHJ pretended to question the legality of the responsibilities acknowledged to the SCRT during the Republican period, forcing them to limit their rights and functions to those specifically reserved to the central syndicates. A similar document was also sent to Madrid, to the Ministry of Public Works, in order to obtain the passing of the decision. The legal basis for this initiative was the Ministerial Order of 1942, which reserved all the functions and responsibilities in water works planning to the *Confederaciones Hidrográficas*.

The communication was firmly refused by the SCRT. They perceived the tone of the document as a terrible offense to their ideological principles and also rejected the legal arguments given for cancelling their rights. No governmental order had altered their specific configuration and, during the first decade of the dictatorship period, the institution had been acknowledged in several public documents, acts and ceremonies. The SCRT replied to the CHJ with a long report and also the institutions belonging to the SCRT sent particular letters to the administration, refusing the proposal.

As a result, at the beginning of 1952, the Director of the CHJ, José Burguera, commissioned two engineers of the institution for the production of two reports on the SCRT and CHJ rights. With both documents and the SCRT pleadings, Burguera produced a final report, which was sent to the Ministry of Public Works.

In this document, Burguera stated that the technicians of the CHJ and the DSHJ had taken a position contrary to the acknowledgement of the *Confederal* level of the SCRT since the first moment, during the Republican period. In their opinion, the institution had been created against the spirit of the law. Moreover, the fact that the SCRT had not developed most of the *Confederaciones* functions was also used by Burguera to argument against the institution, considering the lack of activity as an evidence of the weakness of its legal basis.

⁸ Archive of the *Confederación Hidrográfica del Júcar*, Sitjar, A- 17, box 2, exp. 29

The capability of the SCRT to carry out sound management of water resources was also questioned by the technicians. They based this argument on the experience of the Buseo reservoir, which had been managed by the irrigators of the Huerta de Valencia through the SRPB since 1915. Burguera described a list of errors and failures in the conservation and management of this dam, and proposed to limit the activity of this kind of central syndicates to tax collection.

But in the end, the most important reason to suspend the activity of the SCRT was the removal of the collective-action from the new institutional framework for water. Burguera explained clearly in his report that all this kind of bottom-up structures were opposed to the principles of the new regime: “The relationship between the Confederación and the water users’ should be merely informative, and the management tasks cannot be hindered by assemblies of democratic style”⁹.

To provide more coherence to the new institutional framework, they also proposed to change the name of the CHJ to *Confederación Hidrográfica de Levante*, to clarify that the area allocated to the institution encompassed all the river basins of eastern Spain between the Ebro and Segura rivers. This was the only recommendation of these reports that was not finally considered by the Ministry. When the dam was inaugurated, in 1955, the CHJ had consolidated a centralized and technocratic structure, controlling river regulation processes and managing water distribution among users, and the SCRT had reduced its rights and functions to the local distribution of water for irrigation, losing definitively the *Confederal* status.

DISCUSSION

The initial idea to create a common institution for irrigation management at basin scale was based in an essential and sound principle. The river was like any other main or *mother* channel of the irrigation network and if the local institutions had been capable to perform a successful management of these systems throughout the last centuries, there were no apparent obstacles to implement the same structure at a higher level, nesting the local institutions.

Moreover, according to the principles compiled by Agrawal (2001; 2003), the institutional project had several positive factors which usually enable the successful implementation of the collective-action for common-pool resources management. There were shared norms among all the ICs, simple and easy to understand rules, locally devised access and management rules, overlaps between groups’ residential location and resources location, high levels of dependence by group members on resource system and fairness in allocation of benefits from water resources. The ICs had a long experience accounting officials to users and imposing graduated and reasonable sanctions. In addition to this, there was a high commitment of the administration, which aimed at consolidating the new institution, the SGRT, although did not contributed with financial support.

Nevertheless, the same rules that each IC carefully observed at the internal level were very difficult to implement at the river basin scale, because of the existence of some

⁹ Idem.

constraints, emerged from the basin dimensions. Some basic characteristics of the resource system and the group of appropriators did not facilitate the consolidation of the new institution. Thus, the large size of the resource area and the large number of users were important restriction factors. The control of a large basin with numerous small water users' organizations was a challenging change of scale, even for the most committed ICs, only acquainted with the management at the local scale. This was particularly relevant during the first stage of the study period, when, for instance, an expedition to inspect the Turia river intakes required several days of travel and work, due to the lack of transport facilities. The spatial distance gave independence to the group members and stimulated the free-rider attitudes. Moreover, there were no past successful experiences of common management at this scale and, on the contrary, there was a prolonged history of rivalry between upstream and downstream users.

On paper, the agreements and ordinances of the SGRT were a result of a collective choice and were based on the model of the local ICs. However, since the first constituent meetings of the syndicate board, the representatives of the Upper Turia had expressed their opposition to the system of representation, too advantageous for the Huerta de Valencia. The ICs of the Upper Turia could not see any worth in the SGRT, because their access to the resource and their guarantee of supply was not going to be improved, whereas they had to contribute yearly to the budget of the new institution. All these facts hindered the sustainability of the institutional project, whose survival was conditioned to the permanent support or the coercive action of the administration. As a result of this, during this initial period, even some of the basic principles for successful collective action, such as the well-defined boundaries of the appropriators groups and the resource system, were questioned by some members, which denied the concept of river basin, and tried to separate the groundwater resources and the tributaries from the river hydrological network.

The institutional context changed during the first decades of the twentieth century. Obviously, the characteristics of the resource system did not varied, but the modification of the external environment had a positive influence on some crucial aspects of the group performance. There were three major factors causing the change of the external environment. First, the development of the river regulation projects. The hydraulic control of the basin reduced the unpredictability, altered the status quo in the basin water rights and required new institutional tools for water management. This new scenario, in a favourable legal and political context, stimulated the participation of the water users through the creation syndicates for reservoir management.

Second, as a direct consequence of the river regulation, some *intruders* arrived to the resource area. *Intruders* have been recently defined such as those individuals or groups of individuals (e.g. neighbouring villages, national and international companies) who begin to harvest a resource traditionally used by a local community, and who have not been integrated into the local governmental system and, therefore, have no incentives to preserve the local resource (Pérez *et al.*, 2011). It is difficult to establish if REVA or the SPAPB were exactly potential intruders or simply entrants or new resource appropriators. The nuance is probably in the existence of incentives to preserve the local resource, something difficult to prove in both examples. Anyway, in this study case, both new groups were perceived as intruders by the historical appropriators, and their arrival had a crucial effect on the social context. The potential intruders stimulated the cohesion of the group, which joined their efforts to block the entrance of the new users,

forgetting the former disagreements. The first attempt to create the *Confederación Sindical Hidrográfica del Turia* was in fact, a direct consequence of the REVA initiatives.

Third, the creation of the *Confederaciones Sindicales Hidrográficas* provided a unique opportunity for the ICs to control the river basin management, in a narrow alliance with the hydropower companies. The financial support given by the State to these new institutions disabled one of the most important reasons which have caused the historical resistance of the Upper Turia municipalities and ICs.

These facts contribute to explain the provisional success of the SCRT in the acquisition of the Confederal level. However this success was also the result of an extraordinary capacity of social mobilization. The Valencian ICs conducted an amazing campaign through the mass media, organized massive demonstrations and exercised useful political pressures. They succeeded in creating a collective feeling of grievance, on the basis of the symbolic value of water, merging the interests of farmers from very different social conditions.

During the last stage, under the Franco dictatorship, the external environment completely changed. The State undermined the local powers and rejected the participatory structures of the Confederations. The Confederaciones became a powerful bureaucracy with a presidential structure and close links with civil engineering (Varela and Hernández-Mora, 2010). As a result of this, the pioneer participatory basin agencies become another example of powerful and centralized hydrocracy (Molle et al., 2009).

CONCLUSIONS

The creation of a higher institution made up of the water users of the Turia River basin to manage irrigation at the river basin scale was an extraordinary challenge for the leaders of these local organizations. The ICs of the study area were a successful example of common-pool resources management at the local scale, and tried to transport this model to a higher level. However, the change of scale altered significantly the size of the group and the resource area, going beyond the capabilities of the ICs involved in this initiative, particularly during the nineteenth century.

The external environment was a crucial factor in this study case, facilitating the success of the SCRT in the first decades of the twentieth century and the subsequent failure of the consolidation of a basin agency governed by water users. The role played by intruders and other contextual factors in increasing the cohesion of the group of appropriators must be also underlined, and should be compared with similar experiences in other scenarios.

The collective scholarship on the local common-pool resources institutions has provided useful material for the construction of a relevant theory of the commons. Despite the important number of study cases developed in the recent years, the study case methodology still seems to be useful to improve and to enlarge the list of critical factors influencing the design and sustainability of the common-pool resources institutions. The long term study of institutions, such in this case, is particularly relevant, due to the fact that most of the research in this field has not had a historical perspective.

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