

Case Report

Assessing Inter-Administrative Cooperation in Urban **Public Services: A Case Study of River Municipalities** in the Internal Border Area between Aragon and Catalonia (Spain)

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Abstract: The proper management of urban public services (UPS) ensures that a territory functions efficiently, since it guarantees optimal waste disposal, water supply, and the maintenance of communication infrastructure, among other things. In areas of high urban density located close to metropolitan cities, UPS are usually provided properly and efficiently. However, in less populated territories, lying in the periphery, significant problems and deficiencies are often encountered, being most evident in rural areas located on the administrative limits of a state or region. This paper seeks to analyze the management of UPS in the internal border area between two Spanish regions, Aragon and Catalonia. A total of 72 stakeholders (mayors and town clerks) from 49 river municipalities were involved in this study that employs a quantitative methodology (questionnaire). The perception that there are deficiencies to correct and a clear will to reach agreements and establish cooperation mechanisms is detected in many of the municipalities in the border area. A clear need to cooperate is also apparent in a series of priority UPS, including the promotion of river tourism, town access roads, urban collective passenger transport, and environmental protection.

Keywords: urban public services; inter-administrative cooperation; border studies; internal borders; river municipalities

1. Introduction

Urban public services (UPS) can be defined as those activities that meet citizen needs through a physical system of the production, distribution, provision, and consumption of basic goods [1-3]. Many studies have influenced both the technical and economic importance afforded to UPS, which are fundamental for the operation of cities [4–7] and which include the provision of resources and the collection and disposal of waste [8,9], the distribution of energy and public lighting [10,11], and the maintenance of communication and transport infrastructure [12,13]. Among them, water management is a key element, being provided by means of various UPS: on the one hand, the supply and distribution of drinking water [14–16] and, on the other, the sewage collection system [17]. Moreover, a municipality's urban policy is typically dependent on a combination of public, private, and mixed UPS management. Indeed, while the ownership of the services remains public, there are many instances around the world where municipalities prefer to outsource these services and privatize their management to achieve greater efficiency [18,19].



The proper planning of UPS provides citizens with a better quality of living. Here, the relationship between the core and the periphery can take on particular importance. Thus, suburbs usually experience complex problems related to a UPS deficit [20–22], and rural areas with low population density likewise present problems of accessibility for UPS [23–26], typified by few transportation and mobility resources [27,28]; an intermittent water supply system [29,30]; and scarce or remote health facilities [31–33], schools [34,35], and police and fire stations [36,37]. Indeed, various studies propose an enhanced distribution of UPS in rural areas based on a location-allocation approach using Geographic Information System (GIS) techniques [38–41].

Policies to decentralize and improve accessibility to UPS are one of the challenges faced by governance at different territorial levels, including border areas [42–47]. Such policies, as noted above, are necessary in remote and rural areas. Furthermore, if these areas are located along national or regional peripheral borders (i.e., external or internal borders, respectively), the outlook may be even worse in the absence of both cordial relations and inter-administrative cooperation. Indeed, the "barrier effect" can result in a testing situation for the administrations involved [48–50], making cooperation between cross-border areas essential in such sectors as tourism [51–54], healthcare [55,56], and natural resource management [57–59], among others. The policy of supra-state entities—most notably, the European Union (EU)—has, in recent decades, worked in this direction—that is, the strengthening of cooperation between states and a curtailing of the adverse effects of the classic border [60–65].

Inter-administrative cooperation is more readily addressed in internal border areas that form part of the same state and which share common policies, such as UPS management. However, cooperation is closely linked to the state's internal policy of organization; for example, in most decentralized states the barrier effect of the state's internal borders tends to be more acute, as is the case in Spain [66,67]. The need for the cooperative, shared management of UPS becomes essential for proper spatial planning in territories located some distance from the metropolitan region and suffering marked socioeconomic deficiencies.

The aim of this paper is to describe the role and determine the performance of UPS management in a peripheral rural border area, and to explore and analyze the perceptions that stakeholders have of inter-administrative cooperation between the border regions in the same decentralized state. The border area we study here is differentiated at an administrative level between the Spanish regions or Autonomous Communities of Aragon and Catalonia, yet the territory shares a common physical environment (the basin of the river Ebro) and presents considerable potential for implementing common objectives centered on the management of their UPS. A further aim of our study is that its results might be taken into account by the corresponding administrations and practitioners so as to create the appropriate instruments to solve existing deficiencies and to achieve greater efficiency in the management of UPS.

In seeking to fulfil these aims, this paper (1) reports a quantitative study conducted in the internal border area between two Spanish regions (Aragon and Catalonia); (2) identifies and analyzes inter-administrative cooperation in the delivery of UPS using quantitative methods; and (3) proposes future research on the issues addressed.

2. Materials and Methods

The present study is framed in the context of a broader research project, focused on the analysis of different types of problem and conflict that have been generated in recent times (especially over the last four decades) in the internal border area (IBA) between three Spanish Autonomous Communities: Aragon, Catalonia, and the Valencian Community. The results of this research have been reported in a number of studies conducted at different scales and focusing on different themes [68–70]. These previous studies, based on the conducting of focus groups with public stakeholders (mayors and town clerks) in the territory analyzed, conclude that, for a significant majority of the problems considered, it is essential that cooperation be promoted between the autonomous administrations. The present article

seeks to build on the findings of these earlier studies by employing a questionnaire as a valid and rigorous methodology for collecting information about stakeholder perceptions [71–75].

While some of our previous studies have focused on the Catalonia–Valencian Community IBA, the present study focuses solely on the Aragon–Catalonia IBA (ARCAT-IBA, Figure 1). This area, with a border extending some 360 km, forms part of the Ebro basin and is characterized by its tributaries that run from north to south (Noguera Ribagorçana, Cinca, Matarranya) and a sub-tributary (Algars), which serve as the boundary. Specifically, a total of 57 border municipalities make up the ARCAT-IBA (CM in Figure 1), with an additional 19 (SBM in Figure 1) which, due to their size and proximity, play a secondary role in the border dynamics.

A questionnaire for the ARCAT-IBA public stakeholders (mayors and town clerks) was created with five main objectives: (i) to determine their perception of the deficiencies in UPS management as a result of the different regulations being operated in Aragon and Catalonia, respectively (Q1 in Table 1); (ii) to identify the existence of any formal or informal mechanisms of cooperation being employed by the Catalan and Aragonese administrations (Q2 and Q3 in Table 1); (iii) to appreciate their willingness to strengthen inter-municipal cooperation in the management of UPS, so that the citizens of ARCAT-IBA municipalities might access these services regardless of their origin (Q4 and Q5 in Table 1); (iv) to identify instruments to correct the deficiencies detected (Q6 in Table 1); and, finally, (v) to determine their perception of deficiencies at higher administrative levels (Q7 in Table 1). The questionnaire was answered in person between January and June 2017, following focus group sessions analyzed in previous studies devoted to water management [70]. Although there is evidence of general problems affecting local government in Spain and UPS management (e.g., budget deficits and shortages of administrative personnel), the questionnaire focuses on the specific problems attributable to their condition as border municipalities. Note that Q5 refers to the UPS specifically listed in Spanish regulations [76].

Table 1. Questionnaire used in this study (source: authors).

Q1 : During your term of office as mayor or town clerk, have you encountered situations in which the different regulations applied in Catalonia and Aragon have given rise to problems or difficulties of an administrative nature?
Yes
No
Q2 : Has the Town Council participated in any collaborative projects with neighboring municipalities that belong to the other Autonomous Community?
Yes
No
Q3 : Do you know of any joint cultural, social or political initiatives that have been taken between your municipality and the border municipalities that form part of another Autonomous Community?
Tes Yes
No
Q4 : Do you think that there should be more cooperation between your municipality and the border municipalities that form part of Catalonia/Aragon?
Yes
No
Q5 : In which areas does cooperation (formal or informal) exist, and in which do you think cooperation would be a good idea?

	Cooperation		
UPS Competences	Cooperation Exists	There Should Be Cooper	ation
Waste collection			
Street cleaning			
Town access roads			
Paving and maintenance of public roadways			
Public libraries			
Selective waste collection			
Civil defence			
Social services			
Sports installations			
Urban collective passenger transport			
Environmental protection			
Municipal welfare (Administration) Specialist social services (children, elderly, etc.)			
Promotion of tourism (river tourism)			
Police			
Housing			
Healthcare			
Urban planning			
Museums			
Music conservatories			
Nursery schools			
Others			
Q6 : Do you think legal mechanisms should be put ir unwanted, albeit legal) effects of the border?	n place to somehow re	duce the "negative" (that is	,
No, it is not necessary			
\square No, the agreements between the Autonomous	Communities are suff	icient	
\square Yes, the way the rules are applied should be m	odulated in certain m	unicipalities	
\square Yes, the town councils should be able to activate	te/implement legal me	chanisms	
Yes, a special regime should be created, i.e., that	at of the "border muni	cipality"	
Yes, a consortium (partnership) should be crea	ted		
Yes, an inter-municipal association of municipa	alities (mancomunidae	d) should be created	
Yes. Other options			
Q7 : In your opinion, where do you think the differer of cooperation between the border municipalities?	nt levels of public adm	inistration stand on the que	estion
Administration	Opposed Indiffe	erent Favorable Othe	r
Catalan Government (Generalitat)			
Aragonese Government (Diputación General)			
Catalan provincial councils			
Aragonese provincial councils			
Catalan county councils (comarcas)			
Aragonese county councils (comarcas)			

Table 1. Cont.

The study carried out presents a series of specific methodological characteristics: (i) to facilitate comparison with our previous studies, the numbering given to the contiguous border municipalities (CM) is respected (11–70 in Figure 1); (ii) the second buffer municipalities (SBM) (AA-I in Figure 1) are those located adjacent to the CM and play a secondary role in the border dynamics, so are not included in this study; (iii) as in previous studies, some border municipalities (DM in Figure 1) have been discarded due to their secondary role in the border dynamics resulting from physical geographical barriers or the extent of their border area; (iv) 8 of the 57 Catalan and Aragonese municipalities did not participate (Table 2); (v) 72 stakeholders participated in our study by answering the questionnaire (38 mayors and 34 town clerks), representing 57.1% of the potential stakeholders (Table 1); (vi) in most municipalities, both stakeholders participated (mayor and town clerk), but in some only one of the two participated: mayors only (11, 12, 36, 42, 45, 54, 57, 60, and 64 in Figure 1) and town clerks only (15, 25, 32, 35, 38, 39, 52, and 53 in Figure 1).



Figure 1. Border municipalities between Aragon and Catalonia (source: authors).

		CA	AT	AR							т	1.1
	T	TAR		LED		ER	ZAR HUE		UE	10	otal	
	N٥	%	N°	%	N°	%	N٥	%	N٥	%	N°	%
М	4	66.7	10	50	6	100	2	40	16	80	38	56.7
TC	4	80	15	83.3	3	60	2	40	10	62.5	34	57.6
Total	8	72.7	25	65.8	9	81.8	4	40	26	72.2	72	57.1

Table 2. Technical data of the questionnaires answered. Breakdown of the answers received in relationto the total number of potential stakeholders (source: authors).

CAT = Catalonia (Spanish Autonomous Community); AR = Aragon (Spanish Autonomous Community); TAR = Tarragona (Province of Catalonia); LED = Lleida (Province of Catalonia); TER = Teruel (Province of Aragon); ZAR = Zaragoza (Province of Aragon); HUE = Huesca (Province of Aragon); M = Mayors; TC = Town Clerks; N° = Number of responses; % = percentage of responses compared to potential responses.

3. Results

3.1. Perception of Deficiencies

Table 3 shows the responses to Q1, aimed at gauging the perception of possible deficiencies in UPS management. The results confirm that, in the ARCAT-IBA, there is a majority perception (75%) that the internal border is a problematic element from an administrative point of view that also affects the UPS management. This perception is shared on both sides of the border.

Q1: During your term of office as mayor or town clerk, have you encountered situations in which the different regulations applied in Catalonia and Aragon have given rise to problems or difficulties of an administrative nature?											
Responses	CAT	%	AR	%	Total	%					
Yes	25	75.7	29	74.4	54	75 *					
No	8	24.3	10	25.6	18	25					
Total	33	100	39	100	72	100					

Table 3. Answers obtained in Q1 (Source: Authors).

CAT = Catalonia (Spanish Autonomous Community). AR = Aragon (Spanish Autonomous Community). (*) = Outstanding result.

3.2. Existing Formal or Informal Cooperation Mechanisms

As can be seen in Table 4, most of the responses (75%) affirm that their municipality has not participated in the creation of cooperation mechanisms with the neighboring municipality on the other side of the border. Thus, although there may be specific cases, cooperation mechanisms do not proliferate between the border municipalities.

2: Has the To eighboring m			•	-		nity?
Responses	CAT	%	AR	%	Total	%
Yes	8	25	10	25	18	25
No	24	75	30	75	54	75 *
Total	32	100	40	100	72	100

Table 4. Answers obtained in Q2 (source: authors).

CAT = Catalonia (Spanish Autonomous Community). AR = Aragon (Spanish Autonomous Community). (*) = Outstanding result.

Table 5 shows an unequal response on the two sides of the ARCAT-IBA: while most of the public stakeholders in Catalonia (59.4%) state that there are no cultural, social, or political initiatives that have

been taken between neighboring municipalities, more than half of the public stakeholders (52.5%) in Aragon affirm just the opposite.

Q3: Do you know of any joint cultural, social, or political initiatives that have been taken between your municipality and the border municipalities that belong to another Autonomous Community?										
Responses	CAT	%	AR	%	Total	%				
Yes	13	40.6	21	52.5 *	34	47.2				
No	19	59.4 *	18	45	37	51.4				
DK/NA	0	0	1	2.5	1	1.4				
Total	32	100	40	100	72	100				

Table 5. Answers obtained in Q3 (source: authors).

CAT = Catalonia (Spanish Autonomous Community). AR = Aragon (Spanish Autonomous Community). (*) = Outstanding result.

Thus, from the results shown in Tables 4 and 5, it can be concluded that there is an uneven perception of cooperation between ARCAT-IBA municipalities, although most public stakeholders claim to be unaware of the existence of formal or informal mechanisms. Most of the border area municipalities between Catalonia and Aragon have a low population density, and their population centers are often physically separated by very large distances. In addition, there are sometimes very obvious surface differences in municipal area between both communities, as a result of a divergent evolution of the administrative division. This means that, on many occasions, the perception of interrelationships is different on both sides of the border area. In the discussion section, we examine this issue in greater detail.

3.3. Willingness to Strengthen Inter-Municipal Cooperation in UPS

As can be seen in Table 6, the vast majority of public stakeholders (86.1%) believe that a scenario of greater cooperation between the municipalities on both sides of the ARCAT-IBA would be positive.

nd the border municipalities that form part of Catalonia/Aragon?											
Responses	CAT	%	AR	%	Total	%					
Yes	29	87.9 *	33	84.6	62	86.1 *					
No	2	6.1	5	12.8	7	9.7					
DK/NA	2	6.1	1	2.6	3	4.2					
Total	33	100	39	100	72	100					

Table 6. Answers obtained in Q4 (source: authors).

CAT = Catalonia (Spanish Autonomous Community). AR = Aragon (Spanish Autonomous Community). (*) = Outstanding result.

Table 7 shows interesting data because of its specificity regarding local and supralocal UPS management competences based on Spanish regulations [76]. On the one hand, the results regarding possible cooperation that already exists (Q5A in Table 7) show that, for most municipalities, there are no mechanisms promoting joint cooperation in the management of UPS. However, it should be underlined that the perception of existing cooperation is not so great on the Catalan side, while in Aragon there is a greater awareness of specific agreements on competences such as healthcare and civil defence (on these differences in perception, see the specific discussion in Section 3.2 above).

Level (L) and Ground and (GL) LIDE Commentant and		(Q5A)) Coo	peration	Exist	S	(Q5	5B) Ther	e Sho	uld Be G	Coop	eration
Local (L) and Supralocal (SL) UPS Competences	С	%	Α	%	Т	%	С	%	Α	%	Т	%
(L) Waste collection	3	10.0	3	7.7	6	8.7	6	20.0	13	33.3 *	19	27.5
(L) Street cleaning	2	6.7	2	5.1	4	5.8	4	13.3	6	15.4	10	14.5
(L) Town access roads	2	6.7	5	12.8	7	10.1	15	50.0 *	21	53.8 *	36	52.2 '
(L) Paving and maintenance of public roadways	2	6.7	4	10.3	6	8.7	11	36.7 *	13	33.3 *	24	34.8 '
(L) Public libraries	1	3.3	2	5.1	3	4.3	2	6.7	5	12.8	7	10.1
(SL) Selective waste collection	3	10.0	4	10.3	7	10.1	7	23.3	10	25.6	17	24.6
(L) Civil defence	1	3.3	9	23.1 *	10	14.5	14	46.7 *	17	43.6 *	31	44.9
(SL) Social services	0	0.0	5	12.8	5	7.2	7	23.3	15	38.5 *	22	31.9
(L) Sports installations	2	6.7	6	15.4	8	11.6	8	26.7	7	17.9	15	21.7
(L) Urban collective passenger transport	3	10.0	4	10.3	7	10.1	14	46.7 *	21	53.8 *	35	50.7 '
(SL) Environmental protection	1	3.3	3	7.7	4	5.8	17	56.7 *	18	46.2 *	35	50.7 '
(SL) Municipal welfare	1	3.3	2	5.1	3	4.3	5	16.7	6	15.4	11	15.9
(SL) Specialist social services	2	6.7	2	5.1	4	5.8	6	20.0	10	25.6	16	23.2
(L/SL) Promotion of river tourism	5	16.7	3	7.7	8	11.6	18	60.0 *	24	61.5 *	42	60.9 '
(L/SL) Police	2	6.7	2	5.1	4	5.8	14	46.7 *	12	30.8 *	26	37.7
(L) Housing	0	0.0	1	2.6	1	1.4	5	16.7	7	17.9	12	17.4
(SL) Healthcare	2	6.7	11	28.2 *	13	18.8	11	36.7 *	16	41.0 *	27	39.1
(L) Urban planning	0	0.0	0	0.0	0	0.0	12	40.0 *	8	20.5	20	29.0
(L) Museums	0	0.0	2	5.1	2	2.9	4	13.3	7	17.9	11	15.9
(SL) Music conservatories	2	6.7	3	7.7	5	7.2	3	10.0	6	15.4	9	13.0
(SL) Nursery schools	0	0.0	3	7.7	3	4.3	6	20.0	10	25.6	16	23.2
Others	0	0.0	0	0.0	0	0.0	2	6.7	1	2.5	3	4.3

Table 7. Answers obtained in Q5 (source: authors).

C = Catalonia (Spanish Autonomous Community). A = Aragon (Spanish Autonomous Community). T = Total. (*) = Outstanding result (Q5A > 20%) (Q5B > 30%). (**) = Multiple choice question. Based on 69 responses (30 in the

Catalan side and 39 in the Aragonese side). There are 3 blank responses.

On the other hand, there is a perception on both sides of the border that it would be positive to enter into agreements to meet common management objectives in the delivery of several UPS (>50% in Table 7): the promotion of river tourism (60.9%), town access roads (52.2%), urban collective passenger transport (50.7%), and environmental protection (50.7%). A moderate level of support is also recorded for cooperation in relation to the delivery of other UPS (>30% in Table 7), including civil defence (44.9%), healthcare (39.1%), police (37.7%), the paving and maintenance of public roadways (34.8%), and social services (31.9%). Interestingly, most of the UPS competences that achieve the greatest agreement between both sides of the border are local in nature.

Overall, Table 7 highlights a significant number of results in support of cooperation (both in the sense of recognizing its existence and in favor of its implementation) in the delivery of UPS. There is a clear local perception that cooperation is needed; if a percentage of 30% can be considered a significant indication in this regard, then obviously higher percentages cannot be ignored. In other words, there is a clear perception in the case of certain UPS (town access roads, environmental protection, and the promotion of river tourism) that cooperation mechanisms are essential to guarantee a cohesive and efficient management of public services. It should, however, be borne in mind that, in relation to certain competences, public stakeholders on one side of the border are more interested in cooperating than are those on the other side. For example, in Catalonia they are more interested in cooperating in urban planning (40% vs. 20.5%) and police (46.7% vs. 30.8%), while in Aragon there are calls for greater cooperation in social services (38.5% vs. 23.3%) and waste collection (33.3% vs. 20%).

3.4. Instruments to Correct Deficiencies in UPS Management

A wide variety of possible responses was presented to public stakeholders as administrative solutions to correct deficiencies in UPS management (Table 8). On the Catalan side, the creation of specific cooperation mechanisms in Spanish regulations (48.5%), the possibility of creating a special entity or "border municipality" in Spanish local regulations (42.4%), and the activation and implementation of cooperation mechanisms by the municipalities (39.4%) are seen as valid solutions. On the Aragonese side, only the creation of a special entity attracted a significant degree of agreement (46.2%), a solution that achieved the greatest support when considering stakeholders on both sides of the border (44.4%). In contrast, other solutions that are frequently adopted at the Spanish local level, such as consortiums (partnerships) or inter-municipal associations, are not seen here as effective solutions for correcting deficiencies.

Table 8. Answers	obtained in	Q6 (source:	authors).
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Q6: Do you think legal mechanisms should be put in place to somehow reduce the "negative" (that is, unwanted, albeit legal) effects of the border? **

Responses	CAT	%	AR	%	Total	%
No, it is not necessary	1	3.0	7	17.9	8	11.1
No, the agreements between the Autonomous Communities are sufficient	1	3.0	3	7.7	4	5.6
Yes, the way the rules are applied should be modulated in certain municipalities	16	48.5 *	11	28.2	27	37.5 *
Yes, the Town Councils should be able to activate/implement legal mechanisms	13	39.4 *	10	25.6	23	31.9 *
Yes, a special entity should be created, i.e., that of the "border municipality"	14	42.4 *	18	46.2 *	32	44.4 *
Yes, a consortium (partnership) should be created	0	0	3	7.7	3	4.2
Yes, an inter-municipal association of municipalities (mancomunidad) should be created	3	9.1	5	12.8	8	11.1
Yes. Other options	3	9.1	0	0	3	4.2
DK/NA	0	0	2	5.1	2	2.8

CAT = Catalonia (Spanish Autonomous Community). AR = Aragon (Spanish Autonomous Community). (*) = Outstanding result (>30%). (**) = Multiple choice question. Based on 72 responses (33 on the Catalan side and 39 on the Aragonese side). Three responses were left blank.

3.5. Perception of UPS Deficiencies at Higher Administrative Levels

Table 9 shows the perceptions of public stakeholders regarding the stance taken by higher tiers of administration (district or comarcal, provincial and regional) on the question of cooperation between border municipalities. Most of the stakeholders do not perceive that the supralocal administrations have adopted a position contrary to cooperation, but only those on the Aragonese side consider that the Aragonese supralocal administrations (provincial and district, not regional) have been favorable in their stance. On the Catalan side, the general feeling is that the entire supralocal administration (be it district, provincial, or regional, regardless of which side of the border they are located) has been indifferent to cooperation. Thus, opinions are only shared with regards as to what is perceived as indifference on the part of the regional and provincial administrations to cooperation.

	Opposed				Indifferent			Favourable	:	Other		
Responses N° (%)	С	Α	Т	С	Α	Т	С	Α	Т	С	Α	Т
Catalan Government (Generalitat) (R)	4 (12.9)	1 (3.2)	5 (8.1)	20 (64.5) *	22 (71) *	42 (67.7) *	5 (16.1)	7 (22.6)	12 (19.4)	2 (6.5)	1 (3.2)	3 (4.8)
Aragonese Government (Diputación General) (R)	6 (26.1)	4 (12.5)	10 (18.2)	14 (60.9) *	23 (71.9) *	37 (67.3) *	1 (4.3)	4 (12.5)	5 (9.1)	2 (8.7)	1 (3.1)	3 (5.5)
Catalan provincial councils (P)	2 (7.1)	0 (0)	2 (3.6)	17 (60.7) *	12 (42.9)	29 (51.8) *	8 (28.6)	15 (53.6) *	23 (41.1)	1 (3.6)	1 (3.6)	2 (3.6)
Aragonese provincial councils (P)	2 (8.7)	1 (2.9)	3 (5.3)	15 (65.2) *	10 (29.4)	25 (43.9)	5 (21.7)	22 (64.7) *	27 (47.4)	1 (4.3)	1 (2.9)	2 (3.5)
Catalan county councils (comarcas) (D)	2 (7.4)	0 (0)	2 (3.7)	17 (63.0) *	9 (33.3)	26 (48.1)	7 (25.9)	17 (63) *	24 (44.4)	1 (3.7)	1 (3.7)	2 (3.7)
Aragonese county councils (comarcas) (D)	1 (4.5)	0 (0)	1 (1.8)	14 (63.6) *	6 (17.6)	20 (35.7)	6 (27.3)	27 (79.4) *	33 (58.9) *	1 (4.5)	1 (2.9)	2 (3.6)

Table 9. Answers obtained in Q7 (source: authors).

C = Catalonia (Spanish Autonomous Community). A = Aragon (Spanish Autonomous Community). (R) = Regional administration. (P) = Provincial administration. (D) = District or comarcal administration. (*) = Outstanding result (>50%). (**) = Multiple choice question. Based on 69 responses (32 on the Catalan side and 37 on Aragonese side). There are 3 blank responses.

4. Discussion and Conclusions

UPS management is essential for the well-being of the population, whose basic needs must be met through the provision of these services by different administrative levels (local and supralocal). Rural areas, located far from metropolitan urban centers, are more likely to suffer a lack of proper UPS management. Moreover, when rural areas are also peripheral border areas, this situation is likely to be exacerbated. Here, with the aim of analyzing the management of UPS in rural-border areas, we have carried out a quantitative study of the perception of public stakeholders (mayors and town clerks) in the case of the Spanish internal border area between Catalonia and Aragon (ARCAT-IBA), characterized by the river municipalities of the Ebro basin.

The perception of the existence of deficiencies in UPS management is shared on both sides of the border. Moreover, there is also a common perception that there are not enough cooperation mechanisms to correct these deficiencies. In fact, on both sides of the border, a significant percentage of stakeholders agree that the creation and implementation of cooperation mechanisms for UPS management would be a positive step forward.

The differences in perception regarding the degree of cooperation (existing or desirable) between the municipalities on both sides of the border cannot be considered significant in themselves. There are a number of factors of a geographical nature, linked to the heterogeneity of the whole border area (including the discontinuous distribution of urban settlements and the weak relationship between some municipalities), which condition this perception and which mean that, in many cases, the same situation or problem is interpreted differently on the two sides of the border. These divergences in perception (which can be considered inherent to the border territories, given their usual condition of "periphery" in relation to their respective "centres") could be better understood by conducting a detailed study of just a few municipalities and, in this way, leaving to one side the problems faced by the whole border area.

There is also a shared perception of the positive effects of the collaborative management of UPS for achieving common objectives for people on both sides of the border. This is particularly the case for both local and supralocal UPS competences, such as the promotion of river tourism, town access roads, urban collective passenger transport, and environmental protection, which Catalan and Aragonese public stakeholders alike feel would benefit from greater cooperation. There is also a moderate level of agreement that other competences, such as civil defence, healthcare, police, the paving and maintenance of public roadways, and social services, would benefit from cooperation. All these competences are basic for the social and economic development of peripheral rural border areas.

The promotion of cooperation mechanisms via the creation of a new special entity in the Spanish legal system (the "border municipality") could be way to achieve a satisfactory agreement between the two sides in the long term. This entity could usher in the establishment of different, specific, and more favorable regulations for the socioeconomic development of peripheral municipalities located on Spain's internal borders. In contrast, other more frequently employed formal solutions (i.e., agreements, consortiums, and commonwealths) do not, in many instances, result in a significant degree of cooperation, as they are usually designed for specific scenarios or to address specific problems.

Furthermore, the common perception is that the supralocal administration has been indifferent and distant (neither contrary nor favorable) in its stance to the mechanisms of cooperation. We conclude that the ARCAT-IBA is a territory that is favorable to cooperation in different competences that directly affect UPS management, and that local and supralocal public administrations should take into account this perception of stakeholders to achieve beneficial outcomes for both sides of the border.

Further quantitative research on the questions studied here is needed. The geolocation of UPS and associated statistical analyses aimed at creating efficient location-allocation models should help promote the willingness to cooperate that has been detected using the quantitative methods employed in this study. In addition, the need should be stressed for good decentralization policies and for the consideration of IBAs as a whole territory subject to the same deficiencies in UPS management

We would like to complete this study by highlighting the need also to undertake further research on the management of public services. First of all, because we start from the principle that public services should be implemented equally throughout a territory (whatever its scale) and that it is not admissible, from the point of view of the provision of these services, that a distinction be made by the administration between "central" territories, on the one hand, and "peripheral" territories on the other. From an academic point of view, it is important to highlight that border areas (whether at the regional or state scale) often tend to become peripheral spaces (that is, spaces where deficits accumulate and where the limitations of administrative action are accentuated) and that, in such circumstances, it is essential that public authorities seek to correct these situations of imbalance in order to guarantee equity and territorial cohesion. Secondly, our research illustrates, we believe, the rich scientific possibilities opened up by conducting research in the field and more specifically by entering into dialogue with the stakeholders involved in the situations analyzed. In the course of this study, we have been able to observe that, above and beyond the problems identified and the material difficulties that often exist to address them when taking a "top-down" approach, cooperation mechanisms (which, as a rule, operate from the "bottom-up") often offer practical and highly effective solutions that are worth careful consideration with a view to the future.

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