


Counter-hegemony and cooperative hegemony in asymmetric negotiations: Brazil and Paraguay in the renegotiation of Annex C of The Itaipu Treaty (2008-2011)


Contrahegemonía y hegemonía
cooperativa en negociaciones asimétricas:
Brasil y Paraguay en la renegociación del
Anexo C del Tratado de Itaipú (2008-2011)

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ABSTRACT

This article examines the 2008-2011 renegotiation of Annex C of the Itaipu Treaty through process-tracing based on primary diplomatic records from Brazil's CDO/MRE and contemporaneous press sources. It identifies two interacting mechanisms: a proactive one, driven by Paraguayan counter-hegemonic tactics that increased the reputational cost of inaction; and a reactive one, rooted in Brazil's pursuit of cooperative hegemony, which translated reputational sensitivity into calibrated concessions within institutional limits. Their interaction reshaped bargaining leverage and enabled substantive adjustments to the Annex C

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regime. Conceptually, the study specifies when counter-hegemony becomes effective against a reputationally exposed hegemon; methodologically, it highlights the value of process-tracing for explaining mechanisms in transboundary resource governance.

Keywords: Itaipu – counter-hegemony – diplomacy – transboundary waters – South America.

RESUMEN

Este artículo examina la renegociación del Anexo C del Tratado de Itaipú (2008-2011) mediante un diseño de *process-tracing* basado en registros diplomáticos primarios del CDO/MRE de Brasil y en fuentes periodísticas contemporáneas. Identifica dos mecanismos interrelacionados: uno proactivo, impulsado por tácticas contrahegemónicas paraguayas que aumentaron los costos reputacionales de la inacción; y otro reactivo, derivado de la búsqueda brasileña de una hegemonía cooperativa, que tradujo la sensibilidad reputacional en concesiones calibradas dentro de los límites institucionales. Su interacción reconfiguró el poder de negociación y posibilitó ajustes sustantivos en el régimen del Anexo C. Conceptualmente, el estudio precisa cuándo la contrahegemonía resulta eficaz frente a un hegemon expuesto reputacionalmente; metodológicamente, destaca el valor del *process-tracing* para explicar mecanismos en la gobernanza de recursos transfronterizos.

Palabras clave: Itaipú – contrahegemonía – diplomacia – aguas transfronterizas – América del Sur.

I.- INTRODUCCIÓN

There are several variables that influence the political processes involved in the sharing of transboundary rivers between different states. Among these variables, it is worth mentioning: the geographical position of countries along the river's course – that is, those upstream or downstream (Pohl et al., 2014), cultural aspects of water use (Allouche, 2020) and power asymmetries between countries that share these resources (Zeitoun & Warner, 2006). The aspects related to power asymmetries are best illustrated in two situations: i) when the use of a transboundary river enables the establishment of a cooperative relationship between the riparian states that share it; ii) when the river becomes a source of conflict due to a project for unilateral or unequal use of its waters.

Although the literature on power asymmetry in transboundary basins has advanced in identifying general patterns of hydro-hegemony, we still lack procedural explanations that demonstrate how and when counter-hegemonic strategies of a smaller state become effective in altering bargaining outcomes. In particular, it remains unclear under what conditions a hegemon's engagement in regional leadership and "cooperative hegemony" initiatives generates enough reputational exposure to turn diffuse

political costs into tangible material concessions within the institutional framework for resource sharing.

Understanding hegemony in the context of disputes over transboundary waters helps to reveal aspects that escape traditional analyses of conflicts over this resource (Frey, 1993). Traditional analyses tend to approach the issue solely from the perspective of the war for water (Wolf, 1999). Zeitoun and Warner (2006) point out that control strategies over a river or transboundary waters exploit the power asymmetries that exist between the parties. The most powerful actor in the relationship can influence the outcomes of who gets more water or resources derived from its use through practices that do not presuppose direct confrontation. This action is aggravated by the fact that there is no legal apparatus that can be activated in contexts of dispute (Lautze & Giordano, 2005). For the weaker actor in the relationship, the only option is to adopt counter-hegemonic tactics to achieve results that are more fair or equitable (Cascão, 2008).

This article is part of the discussion on hegemony, counter-hegemony, and transboundary waters, presenting a case study. It deals with the process of renegotiating Annex C of

the Itaipu Treaty conducted between the governments of Luiz Inácio Lula da Silva (2003-2010) in Brazil and Fernando Armindo Lugo de Méndez (2008-2012) in Paraguay. The Itaipu Treaty was signed on April 26, 1973, and deals with the use of water resources of the Paraná River to produce electricity through the binational Itaipu hydroelectric plant. The renegotiation process in question was motivated by the Paraguayan dissatisfaction with the terms of Annex C of the Treaty document. Annex C deals with the financial basis of the Itaipu Treaty and defines the rights of Brazil and Paraguay over the energy produced by Itaipu (Betiol, 1983). In 2024, the terms of Annex C were revised again. However, the negotiation process that took place between 2023 and 2024 is not within the scope of this article.

The question guiding this research is: in what ways and to what extent did Paraguay's counter-hegemonic strategies influenced Brazil to open space for renegotiating Annex C of the Itaipu Treaty? The hypothesis is that the political context experienced by Brazil at the domestic and regional levels motivated the decision. To advance the discussion, we use the concepts of cooperative hegemony and capacity to aggregate power, both formulated by Pedersen (2002) with the aim of understanding the power

of ideas and institutions in regional integration processes.

We use process-tracing to identify and adjudicate two interactive causal mechanisms throughout the renegotiation of Annex C (2008-2011): a proactive mechanism, activated by Paraguayan counter-hegemonic tactics, and a reactive mechanism, associated with Brazil's search for cooperative hegemony and the reputational sensitivity derived from regional leadership projects. The inference mobilizes the classic process-tracing tests – straw-in-the-wind, hoop, smoking gun, and doubly decisive (Beach & Pedersen, 2013). Straw-in-the-wind evidence is weak but consistent evidence of the presence of a mechanism (e.g., increased public salience and nationalist frames on “energy sovereignty” in the media). Hoop tests operate as necessary conditions for keeping the mechanism under consideration, such as diplomatic records that document issue linkage, the search for external support, and coordination between the government, experts, and social movements. Smoking guns are official documents that explicitly connect the Paraguayan pressure to the formalization of the renegotiation agenda (ministerial instructions, bilateral conversations, preparation of reversal notes) or that explicitly state, on the Brazilian side, the need to mitigate reputational costs in regional-multilateral forums.

Doubly decisive results combine necessity and sufficiency, when the chronology and documentary content show, on the one hand, that the increase in reputational costs precedes and conditions substantive changes in Itaipu's financial/decision-making arrangement and, on the other hand, plausibly exclude alternatives such as a mere effect of the electoral cycle or sectoral convenience.

The main corpus of data consists of primary documentation consulted at the General Coordination of Diplomatic Documentation (CDO) of the Ministry of Foreign Affairs (MRE). In addition, widely circulated press articles in Paraguay and Brazil were gathered to reconstruct framing sequences, strategic signals, and the timing of events (each item with a corresponding authorship, vehicle, date and identifier/URL)¹. The reliability of sources is assessed through cross-corroboration. Diplomatic documents offer high-quality evidence but may reflect institutional biases or gaps in access. Press materials help identify issue salience and agenda dynamics, yet they do not establish causality and are verified through cross-outlet comparison and chronological consistency with primary records. Limitations include restricted

access to classified files and uneven coverage. In such cases, the analysis acknowledges the gaps and applies inferential caution.

The findings point to the importance of counter-hegemonic strategies for achieving more equitable outcomes in asymmetric relationships involving resources derived from the shared use of transboundary waters. *Por favor cambiar para:* Nevertheless, the analysis suggests that equitable outcomes are more likely when the most powerful actor in the relationship shows greater sensitivity to the actions taken by the party challenging its power. In contexts of regional leadership, for example, the stronger actor would be more inclined to negotiate and avoid constraints that the challenger's counter-hegemonic strategies could cause to its reputation and foreign policy goals.

2 Considerations on hegemony and counter-hegemony

Hegemony and power are important dimensions for understanding the dynamics of cooperation and conflict involving the sharing of transboundary waters and the resources derived from their use (Zeitoun & Warner, 2006). It is not the objective of this research to explore the ontological bases of the concepts of hegemony and power, an effort previously made in some of the

¹ The Paraguayan press articles considered in the analysis were those cited in the correspondence between the Brazilian Embassy in Asunción and the MRE.

works that serve as our basis (Frey, 1993; Menga, 2016; Zeitoun et al., 2020; Zeitoun & Allan, 2008; Zeitoun & Warner, 2006). Thus, this section presents the ways in which the dimensions of hegemony and power are operationalized in the context of transboundary waters, with the aim of subsequently linking the reviewed literature with the case that is the subject of this article.

The literature dealing with the topic of transboundary waters has undergone a process of theoretical deepening, as approaches that addressed conflicts over this natural resource solely from the perspective of the “water war” proved insufficient to cover the complexity of the topic (Warner et al., 2017). In one of the seminal works that drew attention to this need, Frey (1993) pointed out that theoretical refinement was necessary so that a multiplicity of factors involved could be considered in the analysis. A key point in analyzing conflict and cooperation in transboundary rivers lies in understanding the role that power differences between the actors involved play in the outcomes of each case (Frey, 1993).

With a view to addressing the specific nuances of power involved in the use of transboundary waters, Zeitoun and Warner (2006) formulated the concept of water hegemony. Zeitoun and Warner (2006, p. 435)

define water hegemony as “hegemony at the watershed level, achieved through water resource control strategies...that are made possible by exploiting existing power asymmetries.” In contrast to the literature that tended to approach the question from the perspective of war, the authors argued “that control over water resources is not achieved through water wars, but through a set of power-related tactics and strategies” (Zeitoun & Warner, 2006, p. 436). In other words, understanding the dimensions of hegemony and power in the context of water disputes is important because the more powerful state in the relationship can define the terms of negotiations through means that do not necessarily involve direct confrontation.

In contexts of transboundary water disputes, positive or negative outcomes can be achieved (Zeitoun & Warner, 2006). Which outcomes will be achieved depends on the stance taken by the more powerful state in the relationship. A positive outcome is when the more powerful state is willing to achieve a result that is, to some extent, good for all parties. A negative outcome only meets the desires of the most powerful one or is established in an unequal manner. It should be noted that most critical studies addressing hegemony in the context of transboundary waters focus on cases in which the hegemon

adopts negative practices. There are few empirical studies on cases with positive outcomes (Warner et al., 2017).

A complicating factor in disputes over transboundary waters relates to the absence of specific international law legislation and doctrine on the topic (Gupta, 2016). The weight of state sovereignty in decision-making on the use of transboundary river waters favors conflict (Allouche, 2020). Since a state's decision to use a particular watercourse is not subject to scrutiny by any supranational body (Vij et al., 2020), the decision to cooperate or not is political in nature (Mirumachi, 2015). Negotiations that do not achieve a positive outcome can result in a state of permanent conflict (Lowi, 1993).

The absence of specific rules means that cooperation agreements are reached bilaterally or multilaterally under conditions agreed between the parties (Espíndola & Ribeiro, 2020). It is in this sense that an agreement may be influenced by the most powerful actor in the division of resources (Zeitoun & Allan, 2008). The Itaipu Treaty between Brazil and Paraguay is an example of how the outcome of a treaty on the shared use of a transboundary river came to be contested by the weaker state in the relationship due to considerations of

disparities in access to benefits (Folch, 2016).

Conflicts over transboundary waters and the resources derived from their use tend to be marked by power asymmetries (Menga, 2016). Conflicts do not necessarily presuppose the use of force. Conflict scenarios surrounding the use of natural resources coexist with other instances of political relations between states (Earle et al., 2010). In this sense, states that are weaker in terms of material capabilities tend to adopt counter-hegemonic strategies to seek more equitable outcomes in terms of natural resource sharing (Dinar, 2009). Counter-hegemonic actions are used both in contexts where disputes arise and at later stages when the objective is to transform an established order that is considered unfair (Zeitoun et al., 2017).

Weaker riparian states challenge hegemonic behavior through different counter-hegemonic strategies (Cascão, 2008). Some counter-hegemonic strategies practiced by weaker states in contexts of dispute in North Africa include, for example: "a) claiming positions of moral superiority (application of the principles of international water law); b) use of public media and legal defense campaigns against unilateral projects; c) issue linkage; and d) formation of coalitions between weaker states" (Cascão

& Zeitoun, 2010). Nevertheless, the nature of the subject matter makes formal diplomatic channels the natural means for establishing dialogue between the different parties (Klimes et al., 2019). It should be noted that informal channels of cooperation can also help to build positive outcomes and influence decisions taken in formal settings (Koff, et al., 2020).

It is in these contexts of diplomatic conversations that counter-hegemonic actions reveal their importance in achieving more equitable results. These actions are even more relevant when we consider the interests of the strongest state in the relationship with its neighbors. Because they have greater material capacity to implement projects for the use of transboundary rivers, the most powerful states in a region tend to be at the center of these disputes.

To the extent that the behavior of a regional power is not static (Des-tradi, 2010), and the domestic and regional political context of a hydro-hegemon influences its mode of action (Ho, 2016), conflictual situations can be transformed into cooperative processes. Cooperative scenarios are more feasible in contexts in which the regional power is willing to exercise what Pedersen (2002) defines as “cooperative hegemony”. This concept is useful for understanding how regionalization processes are

formed (Pedersen 2002), something that is like the case explored here, given that in the context in question, Brazil sought to deepen the process of regional integration in South America. Even though it is possible to identify Brazil’s willingness to practice cooperative hegemony, as will be demonstrated later, Paraguay’s counter-hegemonic actions were decisive in pressuring Brazil to open space for the renegotiation of Annex C of the Itaipu Treaty and influence the outcome achieved.

2.1. Conceptual integration: institutional-ideational and sectoral layers of power

The literature on cooperative hegemony (Pedersen, 2002) and hydro-hegemony (Zeitoun & Warner, 2006) is often mobilized in parallel. In this article, we treat them as complementary analytical layers. At the institutional-ideational level, cooperative hegemony describes leadership strategies that prioritize coordination, institution building, and regional legitimacy, producing reputational sensitivity and preferences for agreements that signal benevolence and inclusion. At the sectoral-resource level, hydro-hegemony specifies the repertoires of control (rules, infrastructure, finance, technical knowledge) deployed in transboundary basins, as well as the forms of contestation by less powerful states. Conceptually,

the first layer conditions the incentives of the hegemon (averse to reputational costs and accusations of imperialism), while the second maps the instruments through which such incentives materialize in bargaining and sharing arrangements. The interaction between the two allows us to understand when and how counter-hegemonic tactics – by raising reputational costs in a context of cooperative leadership – shift sectoral balances and result in observable material concessions.

The cumulative explanation requires integrating two adjacent theoretical fronts. First, the literature on asymmetric bargaining illuminates how “weak” sides can increase leverage through coalitions, agenda setting, and strategic use of information, amplifying the cost of inaction on the “strong” side. Second, the logic of issue linkage, already present in critical hydropolitics, explains the coupling between the energy dossier and narratives of sovereignty/development, as well as its extension to extra-sectoral forums and audiences. In the South American context, this dyad is linked to the literature on Brazilian regional leadership: multilateral leadership and integration projects produce audiences and norms of conduct that make the hegemon more responsive to naming and shaming and diffuse reputational costs (Lima & Hirst, 2006; Malamud, 2011; Pinheiro & Gaio, 2014). Thus, cooperative

hegemony (institutional-ideational layer) and hydro-hegemony (sectoral-resource layer) are “stitched together” by mechanisms of asymmetric negotiation and issue linkage, providing an integrated theoretical basis for the case.

This integration has observable implications: (i) at the institutional-ideational level, public signaling of the hegemon’s commitment to regional coordination and solidarity (speeches, joint statements, design of institutions) is expected, as well as the avoidance of frameworks that reinforce stigmas of dominance; (ii) at the sectoral-resource level, negotiated adjustments in prices/financial conditions and/or governance arrangements at Itaipu are expected when coordinated tactics by the smaller state raise the reputational cost of the status quo. The identification of these traits, in a temporal sequence aligned with critical events, is consistent with the process-tracing approach adopted.

3. The Paraná River and Brazil-Paraguay relations: before and after

The dispute over the use of the Paraná River’s water resources for electricity generation dates back to before the signing of the Itaipu Treaty (Menezes, 1987). The Itaipu Treaty was signed between Brazil and Paraguay on April 26, 1973. At that

time, both countries were ruled by military dictatorships, and within the geopolitical context of the Southern Cone of the American continent, Brazil sought to project itself as the most relevant power in the region (Mello, 1996). To achieve this goal, Brazil depended on the construction of a large hydroelectric plant in the Sete Quedas region on the Paraná River (Pereira, 1974).

The first studies for the construction of a plant on the Paraná River were carried out during the administration of Jânio Quadros (1961). However, it was during the administration of João Goulart (1961-1964) that Brazil and Paraguay established talks on the joint use of the river's waters for electricity generation (Espósito Neto, 2012). The *coup d'état* and the establishment of a military dictatorship changed the course of these negotiations with the announcement of Brazil's intention to build an entirely national power plant (Cotrim, 1999). This event triggered a diplomatic crisis between the two countries. The crisis reached its peak with the installation of a Brazilian military presence in the Sete Quedas region, where the hydroelectric plant is located (Blanc, 2018). The impasse was resolved with the signing of the Cataratas Agreement (1966), which ensured that any project aimed at harnessing the Paraná River in that territorial strip should be carried out

jointly and divided equally between the two parties (Barboza, 1992).

The initial budget for the construction of Itaipu was set at USD 12 billion, an amount that was fully raised and paid by Brazil. At the time, there was a feeling in the Brazilian society that Brazil had come out as the loser in the negotiations (Pereira, 1974). Despite the negative perception of Brazilians, it was in Paraguay that the first manifestations of discontent with the Itaipu Treaty took place, even before the plant began operating (Canese, 1980). The main point of dissatisfaction was related to Annex C of the treaty, which dictates the financial basis of the Itaipu Treaty. According to the document, any surplus energy not consumed by one of the parties should be sold exclusively to the other (Tratado de Itaipu, 1973). In addition, the price paid should be fixed for a period of fifty years (De Paula, 2013). The exclusivity of purchasing the surplus and the fixed price served as the basis for Paraguay to accuse Brazil of adopting an imperialist practice regarding the sharing of the waters of the Paraná River and the Itaipu hydroelectric plant (Almeida, 2015).

Although Paraguayan protests began after the treaty was signed, it was only during the 2008 Paraguayan presidential election campaign that demands for its ratification gained

momentum (Dias, 2024). That year's election process placed Itaipu at the center of political debate in the Paraguayan society. Among the presidential candidates, Fernando Lugo, the opposition candidate and one of the favorites, adopted a nationalist tone, preaching Paraguayan sovereignty over its share of the Paraná River's water resources. In this context, Brazilian diplomacy began to closely monitor developments on the topic within Paraguay.

The context of the renegotiation of the Itaipu Treaty was marked by the active Brazilian involvement in regional politics (Malamud, 2011). Brazil was interested in assuming the role of regional leader (Pinheiro & Gaio, 2014), practiced through what can be characterized as cooperative hegemony (Pedersen, 2002). Foreign policy guidelines for neighboring countries were guided by the discourse and practice of solidarity (Amorim, 2010). For Paraguay, this was a positive factor, as this feature of Brazilian foreign policy during this period contributed to easing dialogue on the renegotiation of Annex C. For Brazil, the renegotiation represented an opportunity to deconstruct the country's negative image in Paraguayan society. This negativity was and continues to be largely related to issues involving the Treaty of Itaipu (Lambert, 2016). In addition to the regional aspect, it is worth noting Brazil's intention to project itself

internationally. The idea of Brazil's leadership revolved mainly around its representation in multilateral forums.

Both the goal of regional leadership and the quest for greater projection in the international arena were not unique characteristics of foreign policy in the context under discussion. Historically, Brazil has always aspired to this leading role (Lima & Hirst, 2006). Nevertheless, during the Lula administration (2003-2010), Brazil's international integration reached a level of depth not seen in previous historical moments. Seeking the support of regional countries was an important part of this project. Although there is a certain consensus about Brazil's peaceful relationship with its neighbors (Malamud, 2011), which could suggest that seeking support would be easy, this peaceful relationship is only partially true. During the Lula administration, there were moments when Brazil's image as an imperialist country gained strength in countries such as Paraguay (Almeida, 2015), Bolivia (França, 2015) and Ecuador (Honório, 2019).

With regard to Brazil's pursuit of cooperative hegemony, Pedersen (2002, p. 689) points out that one of the prerequisites for achieving this lies in what he characterizes as the "ability to aggregate power," which "refers to the ability of a major regional power to bring several neighboring

states together around its political project.” This concept helps explain Brazil’s behavior toward its neighbors in that historical context. Paraguay exploited the political moment in which Brazil was seeking this leading role to advance its desires related to the revision of Annex C of the Treaty of Itaipu.

One of the tactics used by Paraguay to engage Brazil in the renegotiation discussions was to seek support for its cause from regional and extra-regional countries. This course of action caught the attention of Brazilian diplomats, who saw meeting Paraguay’s demands as a way to put into practice the solidarity present in their discourse. In addition, Brazil was interested in supporting Fernando Lugo’s continued presidency in Paraguay, given the ideological proximity between the Lula and Lugo administrations. The following section traces the renegotiation process with the aim of identifying the causal mechanisms that explain the results achieved.

4. Tracing the renegotiation process

The sequential reconstruction of the process (2008-2011) highlights the interactive activation of two causal mechanisms. The proactive mechanism emerges when the Paraguayan coalition articulates, still in the 2008 electoral cycle, a nationalist

framework of “energy sovereignty,” amplifies the public prominence of Itaipu, and signals the possibility of internationalizing the dispute through issue linkage and external support. This pressure, traceable in public demonstrations, press releases, and diplomatic communications, converts a technical-sectoral question into a national cause. In response, the reactive mechanism is activated by Brazilian diplomacy as the regional leadership project – anchored in practices of “cooperative hegemony” – makes the government more sensitive to reputational costs. Bureaucratic guidance records and high-level statements signal a willingness to accommodate Paraguay’s agenda without breaking the treaty’s legal framework.

The interaction of these mechanisms can be observed in three milestones: first, after the 2008 election, when maximalist rhetoric gave way to a negotiating approach but preserved the credible threat of multilateralization; second, the Joint Declaration of July 2009, which recognizes the centrality of the subject and establishes a path for negotiation with a view to revising the price and related instruments; third, Brazilian legislative approval in 2011, which materializes costly concessions and stabilizes a new bargaining balance.

4.1. Movements during the Paraguayan election campaign

The 2008 presidential campaign in Paraguay triggered the proactive mechanism. The Itaipu agenda was shifted from a technical-sectoral domain to the center of the political dispute through the framing of “energy sovereignty” and the promise to revise Annex C, with explicit references to the internationalization of the dispute and the search for external support (CDO/MRE, Cable N° 00269). Fernando Lugo’s opposition rhetoric, accusing previous governments of “surrender,” raised the public profile of the topic and signaled a possible linkage between the energy agenda and narratives of sovereignty and development. At the same time, societal networks of movements, technicians, and academics – such as the *Campaña por la Soberanía Hidroeléctrica* (Campaign for Hydroelectric Sovereignty) and the *Coordinadora Nacional por la Integración y Soberanía Energética* (National Coordinator for Energy Integration and Sovereignty) – organized demonstrations and lecture series, reinforcing domestic pressure for renegotiation (CDO/MRE, Cable N° 00269).

The Paraguayan press played different roles. ABC Color emphasized historical asymmetry and denounced the terms of Annex C as “unfair,” while *La Nación* adopted a more moderate tone, relativizing the weight of

the price paid by Brazil and highlighting Paraguayan failures in creating productive uses for the surplus and in transport infrastructure (CDO/MRE, Cables N° 00273; 00347). This dual framing – denunciation of unfairness and sectoral self-criticism – broadened the public debate and anchored the negotiations in the national cause.

The Brazilian Foreign Ministry began to systematically monitor the escalating rhetoric and signs of internationalization. Records from the Brazilian Embassy in Asunción between February and March 2008 note the centrality of the revision of Annex C in the campaign, the articulation of issue linkage, and the prospecting for external support (CDO/MRE, Cables 00273; 00347). On March 24, 2008, Foreign Minister Celso Amorim, in an interview with *Roda Viva*, acknowledged the need for “adequate compensation” to Paraguay, preserving the commitment to comply with agreements and hinting at a solution “in a spirit of solidarity” (Amorim 2008). On March 26, diplomatic communications recorded the domestic effects of the interview and the continued monitoring of scenarios (CDO/MRE, Cable 00430). Subsequently, Brazilian newspapers reported a willingness to negotiate tariffs and related terms (Leal 2008; Monteiro 2008), while consular documentation indicates continued pressure with the expectation that the question would remain

a priority after the election (CDO/MRE, Cable 00624).

In inferential terms, public prominence and nationalist framing are compatible indicators (straw-in-the-wind) with the activation of the proactive mechanism; diplomatic documentation that records issue linkage, the search for external support, and coordination between the government, experts, and social movements serves as a necessary condition (hoop test) for keeping the mechanism under consideration (CDO/MRE, Cables 00273; 00347). In turn, instructions/drafts that incorporate renegotiation as a formal item on the bilateral agenda come close to a standard of sufficiency (smoking gun) by connecting domestic and international pressure to the institutionalization of the subject (CDO/MRE, Cables 00430; 00624). This temporal sequence establishes the basis on which the reactive mechanism – based on the reputational sensitivity of the Brazilian project of cooperative hegemony – becomes observable in subsequent phases.

4.2 Lugo's election and the renegotiation of Annex C

The first half of 2008 was a period of mixed signals. On the Paraguayan side, the winning coalition maintains rhetoric that is maximalist enough to keep the topic as a national cause

and, at the same time, builds institutional bridges to channel the demand for revision (CDO/MRE, Cable N°: 00624). On the Brazilian side, dispatches from April to September 2008 show that the bureaucracy is following the evolution of the subject, testing spaces for accommodation without altering the legal and institutional framework of the Treaty. On April 28, a report indicates that continued pressure resists the electoral calendar and tends to keep the question a priority after the inauguration (CDO/MRE, Cable 00624). In August and September, new communications confirm the centrality of Annex C in the Asunción government's strategy and evaluate concession scenarios compatible with the logic of cooperative hegemony advocated by Brasília (CDO/MRE, Cables 01180; 01468). At the end of the year, the Embassy reports that the Paraguayan government coalition continues to articulate energy nationalism, repricing, and reputational pressure, with the explicit expectation that Brazil's regional leadership project will entail increasing costs of inaction (CDO/MRE, Cable 02169).

In the first quarter of 2009, negotiations entered a decisive phase. On January 14, the Embassy reported Paraguayan moves to multilateralize the dossier as a bargaining chip – a typical amplification of issue linkage (CDO/MRE, Cable 00077). On

January 30, a confidential communication details the selective use of legal and political arguments to support the urgency of the review (CDO/MRE, Cable 00190). On March 27, two confidential cables describe intensified pressure and calibration of positions in Asunción and Brasília, suggesting that the turning point would depend on a high-level gesture that would balance the preservation of the Treaty and the delivery of tangible material gains to the Paraguayan public (CDO/MRE, Cables 00542; 00544). In May a presidential meeting ends in public deadlock, with international coverage reinforcing the visibility of the disagreement, an asymmetric reputational cost, relatively more costly to Brazil due to its commitment to cooperative hegemony (Fabrícia, 2009a). The external reading converges: a confidential dispatch from the US Embassy in Asunción describes a political environment in which the Lugo government keeps Itaipu at the center of the agenda, raising the domestic price of inaction and reinforcing the value of signaling for domestic consumption purposes (Wikileaks, 2009).

The turning point came between June and July 2009, when the combination of reputational constraints and the costs of prolonging the impasse made a compromise formula credible. The compromise was designed to operate on two fronts: (i) preserving the legal framework of

the Treaty, avoiding any precedent for a breach, and (ii) producing material gains for Paraguay that were observable and politically communicable. On July 25, 2009, news coverage announced the presidential agreement, highlighting that Brazil would triple the amount paid for Paraguayan energy surplus, a clear sign of redistribution of gains in the short term (Peixoto, 2009b). Immediately after the announcement, the Embassy in Asunción reported on referral terms and a bureaucratic roadmap for converting the political agreement into formal acts, with defined administrative and legislative milestones (CDO/MRE, Cable 01435). In terms of process-tracing, the sequence suggests that (a) evidence of salience and framing (ABC Color; La Nación) and (b) records of issue linkage and coordination (Cables 00273; 00347; 00077; 00190; 00542; 00544) function as straw-in-the-wind and hoop tests for the activation of the proactive mechanism, while (c) Brazilian public signals (Amorim, 2008; Leal, 2008; Monteiro, 2008) and (d) the formalization of the understanding (Cable 01435) approach a standard of sufficiency (smoking gun) for the activation of the reactive mechanism.

The 2010 phase is marked by the institutionalization of the agreement and the management of veto risks. On January 15, 2010, a cable from the MRE to the Embassy in Asunción formalized guidelines for monitoring

and consolidating related administrative acts, highlighting the transition from the political to the procedural level (CDO/MRE, Cable 00018). Records from May and June indicate the progress of technical negotiations and the monitoring of legislative windows amid a Brazilian domestic context that, although electoral, is treated diplomatically more as an agenda variable than as an efficient cause of concessions (CDO/MRE, Cables 00938; 01089). In November 2010, the Embassy reported that the bureaucratic process was at an advanced stage and that a legislative outcome was expected in the subsequent cycle, with no substantive reversals of the logic of the presidential understanding (CDO/MRE, Cable 02179).

Finally, 2011 provides the legal seal of the new bargaining balance. Between January and April, cables map out negotiations on operational details and strategies for mitigating risks in the legislative process (CDO/MRE, Cables 00006; 00180; 00570; 00581; 00583; 00686). On May 11, 2011, the Brazilian Federal Senate approved an increase in the tariff paid to Paraguay for energy from Itaipu, stabilizing the normative translation of the concessions announced in 2009 and ending, from a legal-institutional point of view, the most sensitive phase of the renegotiation (Agência Senado, 2011, Cable 00808). From an analytical perspective, the legislative

materialization represents the expected endpoint when the interaction of mechanisms – proactive (coordinated pressure that raises reputational costs) and reactive (reputational sensitivity of a hegemon focused on cooperative leadership) – produces costly concessions that are nevertheless compatible with the logic of institutional preservation.

Taken together, the findings support three points. First, the effectiveness of Paraguayan counter-hegemony depended on its ability to combine domestic mobilization, nationalist framing, and issue linkage to external arenas, generating cumulative reputational pressure on Brazil since 2008. Second, Brazil's responsiveness was conditioned by a project of cooperative hegemony that values coordination, regional legitimacy, and reputation management, an arrangement of preferences that makes material concessions a rational option when the cost of inaction increases. Third, rival variables, the 2010 Brazilian election cycle; sectoral/financial convenience; and exogenous diplomatic shocks acted as facilitating conditions or amplifiers but do not explain, in themselves, the temporal pattern and institutionally conservative form of the agreement. The sequence of events between 2008 and 2011, documented in diplomatic records and convergent journalistic coverage, is more parsimoniously explained by the interaction between

mechanisms in an asymmetric dyad under leadership with cooperative pretensions.

To clarify the temporal dimension of the causal process, Table 1 synthesizes the main events observed between

2008 and 2011, linking each step to its corresponding empirical source. This visual representation complements the process-tracing analysis by showing when each mechanism, the proactive and the reactive, became observable.

Table 1 – Timeline of critical events in the Itaipu Annex C renegotiation (2008-2011)

Year/ month	Critical event	Main actors	Primary/ secondary source	Relevance to the causal process
Feb 2008	“Energy sovereignty” becomes central in Lugo’s campaign; Itaipu framed as a national cause.	Lugo; Patriotic Alliance for Change.	Cable No. 00269 (Feb. 28, 2008).	Onset of the proactive mechanism: nationalization of the topic and expectation formation.
Mar 2008	Brazilian Embassy reports early signs of internationalization and issue linkage.	Embassy of Brazil in Asunción; MRE	Cable No. 00347 (Mar. 12, 2008).	Confirms domestic mobilization and emerging reputational pressure.
Mar 24, 2008	FM Celso Amorim’s interview (Roda Viva): signals willingness to negotiate within treaty limits.	Celso Amorim (MRE).	Amorim (2008).	First reactive signal by the hegemon; reputational sensitivity made public
March 26, 2008	Internal coordination after the interview; monitoring of public effects.	Embassy in Asunción.	Cable No. 00430 (March 26, 2008).	Alignment of the reactive mechanism within the bureaucracy.

Apr–Sep 2008	Lugo government institutionalizes renegotiation; Brazil steps up structured monitoring.	Presidency of Paraguay; MRE (Brazil).	Cables Nos. 00624 (Apr 28, 2008), 01180 (Aug 6, 2008), 01468 (Sep 15, 2008).	Parallel consolidation of the proactive (Paraguay) and reactive (Brazil) tracks.
Dec 2008	Discourse of “historical asymmetry” gains traction in Paraguay.	Paraguayan executive coalition.	Cable No. 02169 (Dec. 30, 2008).	Rising reputational cost of Brazilian inaction.
Jan–Mar 2009	Push for multilateralization; escalation before the May summit.	Governments of Paraguay and Brazil.	Cables Nos. 00077 (Jan. 14, 2009), 00190 (Jan. 30, 2009), 00542–00544 (Mar. 27, 2009); BBC News (May 8, 2009).	Stress test of the reactive mechanism; reputational stakes become salient.
July 25, 2009	Presidential understanding: Brazil to triple payment for Paraguayan surplus energy.	Presidents Lugo and Lula.	Peixoto, 2009b (July 25, 2009); Cable No. 01435 (July 28, 2009).	Causal turning point: reputational pressure converted into material concessions.
Jan–Jun 2010	Technical/administrative implementation; inter-agency coordination.	MRE; Eletrobras; ANDE.	Cables Nos. 00018 (Jan. 15, 2010), 00938 (May 19, 2010), 01089 (Jun. 14, 2010).	Bureaucratization and stabilization of the reactive response.
Nov 2010	Legislative follow-up in Brazil under a stable diplomatic climate.	MRE; Brazilian Congress.	Cable No. 02179 (November 11, 2010).	Institutional normalization; cooperative hegemony preserved.

May 2011	Brazilian Senate approves tariff increase, institutionalizing the outcome.	Brazilian Senate.	Agência Senado, 2011 (May 11, 2011); Cable No. 00808 (May 17, 2011).	Final institutional consolidation of the asymmetric cooperative outcome.
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Source: Author's elaboration based on Brazilian diplomatic cables (CDO/MRE) and media reports, 2008-2011.

4.3 *The positive outcome of the renegotiation process*

The outcome of the negotiations surrounding the revision of Annex C of the Itaipu Treaty represented, from a political and diplomatic point of view, a positive result for both parties, albeit asymmetrical in nature and depth. For Paraguay, it meant the transformation of a historical claim into a material and symbolic victory; for Brazil, it demonstrated that its regional leadership based on cooperation and legitimacy could accommodate distributive tensions without compromising the institutional stability of the binational regime. The specialized literature tends to associate this balance with the success of cooperative hegemony strategies (Pedersen 2002), but diplomatic documents from 2008 to 2011 reveal that this result was also the product of fine political engineering, which combined reputational risk management, bureaucratic calibration, and gradual legislative conduct.

From an analytical point of view, the 2011 result can be interpreted as an asymmetric cooperative balance, that is, an arrangement in which the hegemon grants marginal material benefits in exchange for institutional stability and political prestige. This reading is reinforced by the absence of legal revisions in the body of the Treaty, which confirms the success of Brazilian institutional control. Paraguay obtained concrete financial gains (tripling of remuneration for energy surplus), symbolic recognition of its national cause, and international visibility as an actor capable of constructively challenging hegemony. Brazil, in turn, obtained validation of its strategy of cooperative hegemony, reinforcing its reputation for predictable leadership and its ability to convert asymmetric tensions into instruments of legitimization.

The documents analyzed also reveal that the institutional learning of both parties went beyond the Itaipu case. For Asunción, the process consolidated a pattern of negotiation based on multilevel reputation,

alternating domestic mobilization, regional coordination, and moral pressure. For Brasília, it consolidated the conviction that selective material concessions, framed as cooperation, are preferable to prolonged impasses with diffuse reputational costs.

The literature on hydropolitics interprets cases such as Itaipu in light of the notion of cooperative hydro-hegemony (Zeitoun & Warner 2006), in which structural power is mitigated by mechanisms of recognition and redistribution. The documentary findings confirm this proposition, showing that Brazilian hegemony remained intact but legitimized. In practice, Brazil used instruments of normative and financial power to prevent erosion of authority: it negotiated in terms of historical justice but operated within the framework of existing law. Paraguay, in turn, obtained real gains and the moral satisfaction of seeing its narrative internalized by the hegemon.

Thus, the outcome of 2011 not only ended a tariff dispute but also inaugurated a new model of asymmetric recognition in the South American context: cooperation as a currency of power. This result confirms that the effectiveness of cooperative hegemony lies less in imposing rules than in absorbing demands and transforming them into instruments of legitimization. In the case of Itaipu, this meant transforming a historical dispute into a shared diplomatic asset. To enhance the transparency of the inferential process, Table 2 summarizes the empirical observables that link each causal mechanism to its corresponding evidence. The proactive mechanism (Paraguay) and the reactive mechanism (Brazil) are displayed in parallel, each supported by diplomatic cables and media documentation. This mapping clarifies how the conclusions derive from distinct inferential tests within the process-tracing framework.

Table 2 – Observables by mechanism (process-tracing evidence, 2008–2011)

Observable/empirical indicator	Primary source (Diplomatic Cables, Interviews, Press)
A. Proactive mechanism (Paraguay)	
Nationalist framing of “energy sovereignty” during the 2008 campaign (topic nationalization and agenda-setting). (straw-in-the-wind)	Cable No. 00269 (Feb. 28, 2008); ABC Color, Mar.–Apr. 2008

Early linkage between energy pricing and sovereignty/international forums (issue linkage signal). (hoop)	Cable No. 00347 (March 12, 2008); ABC Color, March 2008
Institutionalization of renegotiation demands in the incoming government's platform. (hoop)	Cable No. 00624 (Apr 28, 2008); La Nación, Apr 2008.
"Historical asymmetry/correction" discourse consolidated in official rhetoric. (straw-in-the-wind → hoop)	Cable No. 02169 (Dec. 30, 2008)
Pressure for multilateralization (OAS/UN references) as bargaining lever. (hoop)	Cables Nos. 00077 (Jan. 14, 2009), 00190 (Jan. 30, 2009), 00542–00544 (Mar. 27, 2009)
Public portrayal of Itaipu as historical injustice in Brazilian coverage. (straw-in-the-wind)	Peixoto, 2009a. May 8, 2009
B. Reactive Mechanism (Brazil)	
Early recognition of reputational risks; internal monitoring after Lugo's framing. (hoop)	Cables Nos. 00347 (March 12, 2008), 00430 (March 26, 2008).
Public signal of cooperative intent within treaty limits (responsiveness revealed). (smoking gun)	Amorim, 2008. (March 24, 2008); Monteiro, 2008 (April 22, 2008)
Diplomatic calibration to offer compensations without legal rupture. (hoop)	Cables Nos. 00624 (Apr 28, 2008), 01180 (Aug 6, 2008).
Presidential understanding to triple payment for Paraguayan surplus (material concession). (smoking gun)	Peixoto, 2009b (July 25, 2009); Cable No. 01435 (July 28, 2009)
Administrative implementation and inter-agency coordination. (hoop)	Cables Nos. 00018 (Jan. 15, 2010), 00938 (May 19, 2010), 01089 (Jun. 14, 2010)

Legislative follow-up under stable diplomatic climate. (hoop)	Cable No. 02179 (November 11, 2010).
Senate approval institutionalizing the outcome (final consolidation). (smoking gun → doubly decisive, given sequence) Agência Senado, May 11, 2011; Cable No. 00808 (May 17, 2011)	Agência Senado, May 11, 2011; Cable No. 00808 (May 17, 2011)

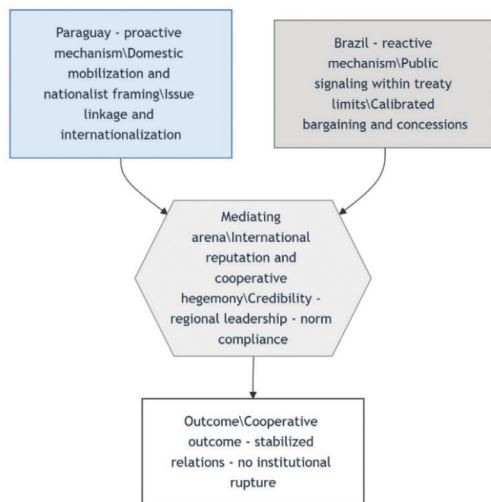
Source: Author’s elaboration based on Brazilian diplomatic cables (CDO/MRE) and media documentation (2008-2011).

To consolidate the analytical logic that emerges from the empirical reconstruction, Figure 1 depicts the causal flow connecting the Paraguayan proactive mechanism and the Brazilian reactive mechanism within a single explanatory model. This visual synthesis translates the narrative sequence into a structured representation of causal interaction. On the left, the diagram traces the domestic mobilization and nationalist framing in Paraguay that generated escalating reputational costs for the Brazilian hegemon. At the center lies the mediating arena of international reputation

and cooperative hegemony, through which reputational pressure was filtered and reinterpreted as a constraint on leadership credibility. On the right, Brazil’s reactive mechanism unfolds through calibrated diplomatic signaling, material concessions, and subsequent institutional consolidation. By displaying these interlocking sequences, the flowchart makes explicit how reputational dynamics operated as the bridge between asymmetry and accommodation, clarifying the theoretical architecture that underpins the case’s process-tracing design.

Figure 1 – Causal Mechanism Flowchart in the Itaipu Annex C Renegotiation (2008–2011)

Figure 1 – Causal Mechanism Flowchart in the Itaipu Annex C Renegotiation (2008–2011)



Source: Author's elaboration based on Brazilian diplomatic cables (CDO/MRE) and media reports, 2008-2011.

5 Conclusion

This article has shown that the renegotiation of Annex C of the Itaipu Treaty (2008-2011) resulted from the interaction between two interdependent causal mechanisms. A proactive mechanism, driven by Paraguay, transformed a technical dispute into a national cause through domestic mobilization, nationalist framing, and selective issue linkage, thereby raising the reputational costs of inaction for Brazil. In turn, a reactive mechanism, associated with Brazil's

pursuit of cooperative hegemony and regional legitimacy, translated reputational sensitivity into political responsiveness and material concessions that preserved the institutional integrity of the Treaty. The chronological sequence of events and the convergence of diplomatic and media evidence support this explanation with analytical parsimony and empirical consistency.

Beyond its empirical reconstruction, the case advances the theoretical understanding of asymmetric

cooperation in transboundary waters. It suggests that counter-hegemonic agency is most effective when it targets the reputational vulnerabilities of a hegemon committed to legitimacy-based leadership. Cooperative hegemony, in this sense, operates as both a constraint and a resource: it limits coercive options but also enables rule-preserving accommodation through calibrated concessions. This finding refines the dialogue between hydro-hegemony and regional power studies, specifying how reputational exposure mediates the translation of normative leadership into distributive outcomes.

Methodologically, the study illustrates how process-tracing can adjudicate multi-level mechanisms, linking domestic mobilization, international reputation, and institutional outcomes, by distinguishing facilitating conditions from decisive causal links. Empirically, it expands the documentation of Brazilian-Paraguayan relations through primary diplomatic evidence and press sources, demonstrating how cooperation can function as a currency of power in asymmetric contexts.

Future research should test the scope of these mechanisms across other South American cases involving shared resources and asymmetrical interdependence, such as Bolivian gas and Yacyretá, assessing when reputational costs become politically

actionable and when cooperative hegemony yields redistributive adjustments. Comparative and formal approaches could further clarify how legitimacy, rather than coercion, sustains hierarchy in regional governance. Ultimately, the renegotiation of the Annex C case reveals that hegemony and counter-hegemony in South America are not mutually exclusive forces but complementary dynamics of regional order.

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Data Availability Statement

Part of the data supporting this study is available through the online links cited in the text. The official diplomatic documentation consulted for the analysis can be made available by the authors upon reasonable request.

Conflict of Interest Statement

The authors declare that there are no conflicts of interest that could have influenced the conduct of their research or the preparation and publication of this article.

Statement of authorship roles

Wilton Dias: Conceptualization, research, data curation, methodology, writing, review and editing.

Antonio Carlos Lessa: Conceptualization, methodology, writing, review and editing.

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