Article

Community-Based Governance and Sustainability in the Paraguayan Pantanal

Luca Eufemia 1,2,*, Izabela Schlindwein 1, Michelle Bonatti 1,2, Sabeth Tara Bayer 1 and Stefan Sieber 1,2

1 SusLAND: Sustainable Land Use in Developing Countries, Leibniz Centre for Agricultural Landscape Research (ZALF e. V), Eberswalder Str. 84, 15374 Müncheberg, Germany; izabela.liz80@gmail.com (I.S.); Michelle.Bonatti@zalf.de (M.B.); Sabeth.Bayer@web.de (S.T.B.); stefan.sieber@zalf.de (S.S.)
2 Department of Agricultural Sciences, Humboldt University, Invalidenstraße 42, 10099 Berlin, Germany
* Correspondence: luca.eufemia@zalf.de; Tel.: +49-(0)33432-82-0

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Abstract: The megadiverse biome of the Paraguayan Pantanal is in danger due to the expansion of cattle ranching and agricultural frontiers that threaten not only the fragile equilibrium of natural resources, but also that of local governance and cultural identities. As a consequence, weak governance stresses the relations between natural resource-dependent communities, generating socio-environmental conflicts. This perception study seeks to find community-based governance models for sustainability in the context of Paraguayan wetlands. According to the organizational principles of community-based natural resource management (CBNRM), we applied qualitative approaches with the use of the Governance Analytical Framework (GAF) to identify problems and social norms. Our findings suggest that the Yshiro indigenous self-organized group (Unión de las Comunidades Indígenas de la Nación Yshiro (UCINY)) can be considered as a model for community-based governance. Besides, we discovered that this specific governance model is highly threatened by the impact of the national neo-extractive economy.

Keywords: community-based governance; indigenous rights; Paraguayan Pantanal; identity; community-based natural resources management

1. Introduction

The Pantanal is one of the largest freshwater wetlands in the world, covering approximately 150,000 km² in the upper basin of the Paraguay River. It occupies part of the territory of three countries: Bolivia, Brazil, and Paraguay. Within Paraguayan territory, the typical vegetation forms a complex of landscapes of alternate flooded savannas or swamps, lagoons, dams, beaches, sandbanks, palm groves of Karanda’y (Copernicia alba), and forests, mainly of red quebracho. It is internationally recognized for its great wealth of wildlife, particularly birds, fish, amphibians, reptiles, and mammals [1–4], containing the highest concentration of aquatic species in the world [5].

The Pantanal biome is in danger due to the expansion of cattle ranching and the agricultural frontier, with periodic burnings and uncontrolled fires [6,7]. Furthermore, poor land use planning, reflected in major deforestation processes, causes a constant increase in the levels of soil erosion and, therefore, the volume of sediments reaching the river, thus affecting the water quality, with negative consequences for the aquatic communities and natural resource-dependent communities [7]. Besides, the lack of socio-economic research in the area is limiting knowledge about the area, as well as negatively affecting the quality of policy decision and implementation [8].

Given the remoteness of the biome, combined with the lack of infrastructure, most of the Paraguayan Pantanal remains wild and well preserved. However, a few urban and populated areas are functioning as a trampoline for an extractive natural resource-driven developmental push,
putting at risk not only the fragile equilibrium of natural resources, but also the local governance and cultural identities. Weak governance further stresses the relations between natural resource-dependent communities, generating socio-environmental conflicts [9].

Since the role of strong governance favors the mechanism of social inclusion, here, governance is understood as the processes of interaction among the actors involved in collective problems that lead to the creation of social norms and institutions [10]. Whereas community-based governance models can strengthen the self-awareness of populations in the face of natural or man-made impacts, they can also leverage processes of good public policies and applications of Traditional Ecological Knowledge (TEK).

Based on this, our research question seeks to find a community-based governance model for sustainability in the context of threatened Paraguayan wetlands. Therefore, by analyzing local groups perceptions, knowledge and practices (e.g., TEK) in a scenario of conflict over land distribution and use, our aim is to understand the relevance of the relation to land, the interests, power relations, and influences of community identity, as well as to describe what are perceived to be collective problems and social norms. From this, our objective is to understand and investigate governance processes in the area of study.

**Political Ecology and Community-Based Natural Resource Management (CBNRM)**

Empirical analyses on environmental changes and the interdependence and relations among groups of people are often correlated with the socio-political consequences of environmental changes [11]. Political ecology helps us to better comprehend the dichotomy between natural resources and humans. In light of environmental and governance processes, academic studies on theories of social and cooperation movements use political ecology to describe current situations and their causal variables [12–15]. Environmental destruction and over exploitation are caused by the irrational use of natural resources, meaning the increase in their productivity and economic output. In this regard, conflicts arising from it are linked to socio and political economy, where a constant dialectic of change between natural resources and social groups exists [12,16,17].

In this paper, our political ecological approach focuses on community-based natural resource management (CBNRM) as a useful theoretical tool to address both the community empowerment overuse and the management of natural resources, including the relevance of TEK and the complexity of governance models. A key aspect of CBNRM regards the role of power given to local communities to use and manage natural resources [18]. Likewise, frameworks bridging policy, economic, social, environmental and legal concepts to sustainably managing both landscapes/ecosystems and the livelihoods of local communities are embedded in the theory of CBNRM [16,19–23]. We chose this approach to better understand and investigate community-based governance models for sustainability in the context of wetlands.

**2. Materials and Methods**

**2.1. Case Study Description**

The history of Bahía Negra is strongly influenced by its location in the strategic tri-border area at the junction of Paraguay, Bolivia, and Brazil, where the Paraguay River and the Rio Negro flow. The territorial annexation and control of the port of Bahía Negra was a trigger for the Chaco War between Bolivia and Paraguay, fought from 1932 to 1935. The conflict was over the control of the northern region of the South American’s Gran Chaco. The conclusion gave Paraguay definitive sovereignty over Bahía Negra.

Only in April 2005, through Law 2.563/05, was the municipality of Bahía Negra formally established. The estimated population for 2017 is approximately 2500, based on 2015 census data [24]. Its inhabitants engage in fishing, cattle ranching, farming, small-scale tourism, and trade. The cultural diversity found in Bahía Negra shapes its governance patterns [8,25].
Since the 19th century, the banks of the Paraguay River are the ancestral territory of the Yshiro indigenous group. Approximately 54,300 hectares of land are registered as their property [26]. The Yshiro is the largest human community in the area and most of their population lives in colonies around the municipality of Bahía Negra. They are part of the so-called “Yshiro Nation”. (Figure 1).


2.2. Procedures

Our methodological procedure is partially based on the Governance Analytical Framework (GAF). We chose this for its set of non-normative approaches that guide exploring the role of governance for the analysis of collective problems and actions. As described by Hufty [10], the GAF “is a realistic methodology for investigating governance processes, meaning the social interactions in which actors make decisions regarding collective problems and issues, thereby creating, reinforcing, or changing social norms and institutions (p. 418).”

To extrapolate practices of community-based governance and within the borders of the GAF, we included two methodological tools: problems and social norms. The first includes the analysis of problems, given their plurality, the perceived degree of threat, and the socio-economic context where they fit. The second explores the “rules of the game” in terms of governance and how rules are established within a hierarchical frame. Problems and social norms are investigated in the light of not just perceiving interviewers’ behavior and specific issues, but also within the socio-economic context of such insights.
Our research is divided into three main steps. First, we carried out a preliminary overlook of the available literature and conducted a stakeholder mapping of the area, with specific regard to the state of the Yshiro. Secondly, we performed semi-structured interviews with 15 different institutions or groups in the field, representing three sectors of society (public, private, and civil society) and involving 52 participants. From the public sector, we engaged representatives of environmental and tourist secretaries and ministries, as well as of local, regional and central authorities. The private sector is represented by national and foreign companies committed to agro-pastoral expansion in the area, mostly cattle ranching. Civil society is represented by international and national environmental and human rights NGOs, local universities, rural and indigenous communities, as well as national and local media. Interviews took place in both the capital city of Asunción and the Municipality of Bahía Negra. Finally, we conducted a focus group with 10 community leaders of the Yshiro in order to better examine environments, behaviors and interactions [27,28].

Data analysis was performed according to Gruber’s framework of 12 organizational principles of CBNRM. They focus on strategic and inclusive planning for sustainable land use and management of natural resources [29]. The corresponding list is presented in Table 1.

Table 1. The Organizational Principles of community-based natural resource management (CBNRM).

| 1. Public Participation and Mobilization |
| 2. Social Capital and Collaborative Partnerships |
| 3. Resources and Equity |
| 4. Communication and Information Dissemination |
| 5. Research and Information Development |
| 6. Devolution and Empowerment Including Establishing Rules and Procedures |
| 7. Public Trust and Legitimacy |
| 8. Monitoring, Feedback, and Accountability |
| 10. Participatory Decision Making |
| 11. Enabling Environment: Optimal Pre or Early Conditions |
| 12. Conflict Resolution and Cooperation |

Source: Gruber 2010.

3. Results

The results are framed according to the two tools of the GAF: problems and social norms. We found that the Yshiro can represent a community-based governance model, by including TEK, for sustainability in the context of threatened Paraguayan wetlands. For this reason, the emphasis of the description below focuses on the Yshiro community (represented by 10 community leaders) and its relation to natural resource use and management. The outcomes of the interviews with the other 15 groups (involving 52 participants) helped us to interpret and better understand the indigenous experience.

3.1. Problems

Land claims are a major problem for the Yshiro community as they define their historic and present identity. To deconstruct this problem, we discuss the perceived degree to which land use rights affect the group’s societal and economic development. Within the many perceived problems by both the Yshiro community leaders and the 15 institutions, the one perceived by the indigenous community is regarded as the most relevant, not only because they represent the largest portion of the society, but also because of the impact it has on their survival as a group.

Figure 2 shows the indigenous group’s perceived problems, with categories designed according to the structure of the GAF as well as the questionnaire used for the interviews. We asked respondents to define and rank the contextual factors behind the perceived problems (hard facts), the problems themselves (problem and impact), the causes of them (nature of the problem), and the system of formal and informal laws that exist (response), whether or not it is implemented and respected.
3.2. Social Norms

Formal and informal norms serve to guide the behavior of community members, facilitating collective actions that make an impact, regardless of whether it is perceived to be right or wrong. The *cosmovision* of the Yshiro community [30] is part of a myriad of social norms observed in the area and, therefore, is part of what is understood as normative pluralism [10,31]. In this context, we categorize social norms within the meaning of (a) values and beliefs, (b) the perception of development and (c) the forms of community representation (Table 2). By adding some of the most representative quotes of community leaders (QCL) of the Unión de las Comunidades Indígenas de la Nación Yshiro (UCINY), we try to give a voice to the Yshiro in order to account for their status of social invisibility. Established in 2000, the UCINY represents the Yshiro communities. It has its own legal board, coordinator, secretary, and advisers. The main goal is to rebuild the ancestral territory of the Yshiro. Below each quote, we include a line of reasoning that aims to interpret the perceptions presented [Interpretation]
Table 2. Connection between (a) values and beliefs, (b) the perception of development and (c) the forms of community representation with the Organizational Principles of CBNRM.

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<td>Enabling Environment: Optimal Pre or Early Conditions</td>
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Source: Author’s own elaboration.

About values and beliefs (a), the Yshiro present two major concepts. First, their connection with the land defines both their identity and indigeneity. Second, the understanding of the group’s vulnerability shapes the path for future generations.

[QCL1] “We (the Yshiro) are like plants, we grow up here, we stay here, and we die here”

[Interpretation] For the Yshiro, the land is the center of the universe, the heart of their culture, and the origin of their identity as a people. As for many other indigenous communities, human and land (or earth) is one unit. It connects the community with their past (as the home of their ancestors), with the present (as a provider of their material needs) and with the future (as the legacy they keep for their children and grandchildren). This is how the Yshiro entail a sense of belonging to a place.

[QCL2] “Our ancestors fought for this land, we need to fight (peacefully) so that our sons and grandsons can stay (and not migrate to the cities).”

[Interpretation] The Yshiro understand their place in the (modern) world as well as their legacy from the past, what they live with today and pass on to future. A perception of vulnerability comes along with the need to maintain those legacies. Conceiving the possibility of development in the modern world implies the inclusion of core values and beliefs (e.g., the concept of reciprocity).

The importance of the Yshiro local perception of development (b) includes two main considerations. First, the need to improve networking and find new connections. Second, the impact of marginalization and the related new forms of development.

[QCL3] “We shall cross the river on the other side and seek support from other indigenous group from Brazil.”

[Interpretation] Although ancestral territories may be divided by the borders between countries, and by administrative political boundaries, those are fictitious or artificial divisions for the Yshiro. This idea may be seen as a form of indigenous diplomacy, where improving supporting networking with indigenous and non-indigenous communities is perceived as an element of development.

[QCL4] “We use axe and machete to work the land. We need to cultivate and (quite often) go and sell the manioc in the streets of the little town. It is labor intensive (to walk 7 km each way). That’s one of the main reasons people are slowly leaving our indigenous colonies to bigger urban areas (destined to begging, etc.). We need (instead) tractors for the field.”
The Yshiro understand the impact of marginalization on their labor, thus having an impact on the present and future progress of the community. Alongside the need to strengthen their network, they also understand the need to increase their knowledge of (modern) farm practices in order to improve their economic development.

“The indigenous people cannot only live out of nature (or not anymore). Resources are decreasing with the destruction and depletion of the environment. We need to act and live differently from the past. Our daily hard work on land is merely subsistence. The indigenous should turn from hunters to small producers. We have already started the process but we lack capacity and means.”

Similar to the interpretation above, the Yshiro need and want to improve their farm practices. This can be seen as a call for support and capacity building from external actors.

“Cattle ranchers and landowners, who are our neighbors, are using tractors, they deforest with chainsaw … They don’t need much human labor. All is mechanized. Cattle ranchers use workforce that comes from other part of the country. They don’t use local workforce.”

On the one hand, the Yshiro tend to be open to learning and increasing their own productivity, on the other hand, they criticize the lack of labor inclusion in industrialized farming. Once more, this quote shows the openness of the indigenous group to take part in the (modern) local development, although when agriculture and livestock production exclude indigenous labor force, a sense of frustration arises.

Community representation (c) is shaped by three core elements. First, by the group’s acknowledgment of a status of exclusion and the corresponding lack of recognition. Second, by the relations between human/territorial rights and the vision of the State. Third, by the hierarchical structure of the group.

“We need to reconstruct our power.”

To reconstruct the power of the Yshiro means to find new spaces to reaffirm the right to self-determination, as well as to increase their distinct political, legal, economic, social and cultural institutions.

“We need to fight for our land and territory within a new world (not the one like our ancestors). We shall use a lot of what is offered by the Westernized world; but focus on preserving our (language) and land. We want people and the State to understand that its national constitution talks about a multiethnic and multicultural Paraguay. We are it.”

Here, the Yshiro advocate for a truly intercultural democracy. The same is based on the complementary exercise and on equal terms of three concepts: direct, participatory, and representative. Alongside the right to self-determination, the Yshiro understanding of democracy implies transforming a condition of exclusion to one of inclusion (e.g., political, economic, etc.).

“Images of indigenous people on publications and reports are good advertising. Not more than that. Real participation and representation of the Yshiro in decision making does not exist. We don’t have any benefit in it even if we are invited to round tables, etc.”

Once more, community representation includes effective participation in the exercise of decision-making processes. The Yshiro criticize the way in which their image is most commonly used by civil society (e.g., NGOs and development agencies) and by the
state. This call to change external approaches to indigenous group shows how imagery representations can foster forms of discrimination (e.g., gender, ethnicity, etc.), resulting in marginalization and exclusion.

[QCL10] “Politics sell the rights of indigenous people.”

[Interpretation] This critique regards the political discourse and propaganda (especially out of election period) that turn the images of the indigenous people into mere ‘products’. This idea reinforces the link between political and economic strategies of development (e.g., neo-extractivism), thus causing a negative impact on the community representation of the Yshiro.

[QCL11] “Foreigners come and buy (our) ancestral land.”

[Interpretation] This quote resumes the critique against neo-extractive policies of the state, often forcing indigenous people to leave their ancestral land in order to make way for (foreign) land speculation. Similar to the above, the way in which development is imposed is perceived as a threat to the indigenous land, thus to their identity and survival.

4. Discussion

This discussion is framed according to the two tools of the GAF: problems and social norms. These key elements guide us to explore community-based governance models for sustainability in the area. Besides, by de-constructing them, we are able to better describe and assess the performance and configurations of governance under the umbrella of the 12 principles of CBNRM.

4.1. Problems

The findings about perceived problems by the Yshiro show that land grabbing and group marginalization represent their main tangible concerns, while structural discrimination and land distribution are regarded as side problematic concepts, yet tangible and existent. The instruments the community sees at its disposal are in the legal system as well as in their own form of institutionalization as an instrument to deal with conflict resolution and cooperation (point 12 in Table 1).

Structural discrimination is found to be grounded into historical and socially constructed values and stigmas against the indigenous communities. In 2008, the Truth and Justice Commission (Comisión de Verdad y Justicia (CVJ)) sought to officially establish the truth and historical justice about the acts of violation of human rights that occurred in Paraguay, essentially during the Stroessner dictatorship (1954–1989). The act established a broad historical period of study and pointed out serious violations. We use it consistently because it reaffirms the validity of the results in this section. In the chapter on the rights of indigenous peoples (article 157), the CVJ argues that the dispossession of the indigenous territories was part of a State policy against individuals and peoples, denying them not only the right to own their lands and territories, but also fundamental rights, such as the right to life, personal identity, freedom, and integrity [32,33].

In addition, as stated in the same document, there are evident practices of discrimination against the indigenous in the distribution of resources for the purchase of land and the privileged sale of land to foreigners [33]. Previous studies theorize forms of structural discrimination focusing on minorities (e.g., gender, race, inequality, and poverty) and, therefore, are an asset to this work for their multi-facet depiction of discrimination [34–36]. By observing how to adopt models of development that are a threat to the maintenance and respect of cultural diversity, more specifically in indigenous societies, the case of the Yshiro in Paraguay may reveal additional facets of received discrimination.

Structural discrimination factors are facilitated, if not driven, by both the irrelevance of the rule of law (e.g., role of the public sector) and interethnic factors [37–40]. The latter is understood as the relations among individuals and groups with different national, racial, cultural origins, as well as
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ethnic belonging [37–42]. Discourses based in fixed concepts and stereotypes serve as the basis for marginalization and social invisibility. As for the case of the Yshiro, the incommunicability between global and local generates a mutual exclusion between the actors involved.

Stereotypes are grounded on the recognition of non-acceptance of the ethnic, cultural, and historical differences, the function of which is to create a “new place” of “subject peoples.” These subjects, however, are placed disproportionately between opposition and domination [43]. The existence of structural discrimination toward the Yshiro group and, in general, toward all indigenous communities in Paraguay can be defined as the form of discrimination that is encouraged by central government policies favoring agribusiness and real-estate speculation over indigenous land rights. Besides, the weak implementation of basic concepts of the rule of law (e.g., constitutional rights, etc.) facilitates this discrimination. Paraguay can be considered a case where the primacy of a type of economy prevails over rights.

Neo-extractivism is a strategy of capital investment, incentivized or implemented by national states, based on the extraction of biophysical resources of different types, which involve the transformation of property rights and use of sub-national territories for the commercial production, to the general disadvantage of its previous owners or users [44]. Most dramatically, from the human rights perspective that underlies the structural discrimination is that neo-extractivism overrides the plans and projects developed by knowledgeable local populations through participatory activities [45]. This concept is reflected in the structural discrimination perceived by the Yshiro.

Land grabbing and group marginalization are the most pressing problems revealed in the interviews. They are motivated by the economic interests of a minority of large-scale landowners (e.g., landlords, etc.). In the context of Paraguay, the high dependence on extractivist models, based on exploiting natural resources on a large scale, is an engine of inequality that has led to a high concentration of land and wealth. Neo-extractive economies do not account for environmental costs, only accounting for the productive growth of the intensive exploitation of resources without taking into account their negative impacts on both biophysical processes and on territorial populations—in particular, indigenous ones [45,46].

As a result, violence against those who defend the land, water, and forests, as well as the rights of women, indigenous peoples, and rural communities, has increased [47]. As for the Yshiro community, land grabbing and group marginalization goes hand in hand as it has, according to the results, an increase in forced displacement to urban centers. The CVJ reports (article 164) that the absence of public services, health, education, and drinking water in rural and indigenous communities is chronic, under the jurisdictions of the central government, the governorates and the municipalities (p. 60) [33]. Indigenous peoples, including the Yshiro, have been victims of the continuous dispossession of their territories, before, during, and after the dictatorship of General Stroessner—the State being responsible because it is their responsibility to respect and guarantee rights (Article 156, p. 58) [33].

Hence, Paraguay designs and implements policies that, in practice, tend to legitimize investments that cause negative social and environmental results. Moreover, neo-extractive policies and practices, in addition to generating highly trans-nationalized schemes, have also given way to processes of land grabbing, even in those countries with constitutions that guarantee the territorial rights of local populations [44]. What emerged from the community perception of governance processes is a sense of being patronized by most of the actors, particularly public institutions. Top-down policies tend to widen, thus reinforcing the gap between them and “the others.” This includes, for example, non-inclusive education. As a result, socially constructed issues (e.g., values and stigmas) underlie ideological violence, which is also embedded into humanitarian and conservation agencies. Blaser (2009) reminds that bureaucratic scientific conservation could only be applied among the Yshiro through the actual or threatened use of coercive force. He cites government measures imposed in 2001 by the Environment Secretariat as an example. This included the reinforcement of police surveillance in the Yshiro area [30]. Further, most of the traditional Yshiro territory was declared a biosphere reserve and incorporated into a National Park without consent of the Yshiro. Blaser (2009) believes...
that by considering the “Yshiro conservation” as being improper, bureaucrats implicitly claim to have an epistemologically superior understanding of the environment, because it is not influenced by culture [30].

**The nature of the problem** is found in the way land is distributed in the region. Land distribution is systematically thought to be fuzzy as the state holds so little capacity that informal and power relations (especially economic power) prevail. The relationship between State and inter-ethnic groups is complex and difficult, even after policies for identity reaffirmation were adopted in different Latin American countries, such as Bolivia and Peru. In addition to the asymmetric relations between indigenous land rights and state apparatuses, the right for any alternative culture to exist was historically denied [27,48–51].

The history of land tenure in Paraguay underwent radical changes with the laws of sales of public lands made in 1883, 1885, and 1886. With the privatization of public lands, thousands of peasants and indigenous peoples were forcibly displaced [4,25,47]. In some cases, the land in towns is owned by a private firm, including, for example, Puerto Casado. The previous system of land tenure, which came from the time of Independence, did not require a property title to use state lands. The laws of the sale of the public lands postulated a radical change of the perspective of the development of the country. In the 1870s, the State prioritized agricultural development based on the free transfer of land and farms to farmers and, under the same conditions, promoted the immigration of European farmers [2,4,25,26,33].

The shift in the regulations on public lands caused the prioritization of extensive agriculture and livestock production. Governments in power then wanted to take advantage of the increase in land prices in Argentina by selling Paraguayan land to attract foreign capital at much lower prices than the neighboring countries [52]. Under these circumstances, commission agents of foreign investments entered the country and acquired lands with pastures for livestock and forests for logging and timber exports. The rising influence of foreign capitalism and elitist upper-class interests are the main consequences of these policies.

In the chapter regarding rural land distribution, the CVJ examined titles of land property in Paraguay granted by state agencies responsible for agrarian reforms between 1954 and 2003. Serious irregularities in the adjudication and/or concession of land were found (Article 192, p. 71) [33]. Studies by the National Institute for Rural Development and Land (INDERT), the Agrarian Reform Institute (IRA), and the Instituto de Reforma Agraria Rural Well-being (IBR) verify that the State, within the period from 1954 to 2003, delivered more than 200 land concessions, comprising a total area of more than 12 million hectares, of which more approximately 4 million hectares corresponded to the region where the Pantanal is located (Article 194, p. 74) [33].

Over the last twenty years, low prices and favorable purchasing conditions anticipated the massive entry of speculative foreign capital and the transformation of the political class into the dominant economic class. According to Guereña and Rojas [52], Paraguay has a very high percentage of foreign landowners, who also have close ties to political and economic power. The pressures around land use and distribution have made the owners diversify their tenure strategies, dividing properties into several farms of smaller size, creating joint-stock companies in order to hide the names of the owners, and registering properties on behalf of third parties, among others. Paraguay can be considered a latifundian country, almost feudal, where every area of the country has one or a few landlords who own the land, production, and wealth [52]. Article 162 of the CVJ states that the (historical and continuous) forced displacement of indigenous people and peasant communities, as a result of the territorial dispossession of which they were victims, added to the absence of protection of the State in their dignity and rights (p. 59) [33]. This has been and continues to be a source of segregation practices, as in some colonies of the Chaco and in practices similar to slavery on livestock ranches. In the context of territorial insecurity of the Yshiro, there is also a violation of community cultural heritage, the loss of traditional medicine, and the loss of traditional subsistence practices.
The territory, called yrmo by the indigenous community, means cosmos and it is what constitutes them as people [30,53]. The Yshiro have a strong bond to land and, therefore, are the ones most likely to preserve it or use it sustainably. However, they face new challenges that affect not only their governance patterns, but also their survival as a group. The group identity is forged by the occupation and use of the land. In the yrmo, the critical nexus between human behavior and the availability of animals is the reciprocity that must prevail in the network composed of both humans and the force which is understood as the manifestation of an original specimen [30]. If animals are not available, it means that the flow of reciprocity is failing at certain points in the network, usually in a human-to-human interface of the network. Thus, awareness and self-awareness are used by the community as an element of community-based governance.

The Yshiro’s practices would be considered anomalies that cannot be negotiated according to modernity values. Blaser endorses this affirmation, through the concepts of Nadasdy [30,54]. When bureaucrats and experts comprehend the indigenous knowledges, those knowledges end up being marginalized because they often contradict the assumptions on which bureaucratic and scientific concerns, goals, and politics are based [54].

Ultimately, the yrmo is what constitutes the Yshiro as people. Human and nonhuman relations are also a component of indigenous identities [55,56]. Reciprocity is the basis for the organization of society and disrespect for such instructions can have negative results in the form of illness, death, drought, and flood [30]. The reality perceived by the Yshiro is that they are placed at the lowest level of hierarchical social categories by other groups of society. Arguments based on anthropological knowledge argue how the yrmo itself underwent a transformation from the contact and interaction with the non-indigenous settlers, institutions and their policies [30].

The Yshiro response to such structural problematics is the current system of rights and the role played by their own self-institutionalized group, the UCINY. In Figure 2, we presented the short list of the system of formal and informal laws, including the national and international levels that are instruments available to the Yshiro in order to respond to their problems. From a historical perspective, the progressive expansion of European civilization failed to include the cultural, identity, and territorial roles of indigenous communities [57–60]. The case of the Yshiro is only one example of the result of a permanent condition of subalternity, even beyond the phenomenon of decolonization.

According to Falk [61], for example, indigenous communities represent the most vulnerable category of peoples, not only for being primary victims of exploitation and oppression, but for having been denied the benefits of decolonization. If their existence was limited, then indigenous communities could be, at most, a figure for folklore or a topic of anthropological research [62,63]. Their emergence as subjects of law, however, within either national or international laws, derives from the birth and growth of widespread social and political movements. In our case study, the UCINY is perceived as an instrument for conflict resolution and cooperation (point 12 in Table 1) with the ability to transcend the current set of institutions and laws [20].

Protecting and preserving indigenous rights is enshrined in both Constitutional and administrative law in Paraguay. These rights aim to protect, among other issues, their ethnic identity, their right to participation, their community right, their native language, their education, their health, and their tax exemptions (positive discrimination). However, according to the perceptions of all actors engaged in this research, the absence of a consolidated presence of the State (e.g., rule of law) in the area leads to the rules being irrelevant. Only the community-level self-institutionalized group of the UCINY seems to be fertile ground and a governance pattern that responds to their problems and their impacts.

4.2. Social Norms

As shown in Table 2, this item deepens the Yshiro community leaders’ discourses raised in the focus group presented. In order to describe group social invisibility, we analyzed three main categories embedded in 11 of the 12 CBNRM principles (Table 1): (a) values and beliefs, (b) local perception of development, and (c) community representation.
From the statements of community leaders (i.e., see QCL1 in Social Norms, values and beliefs a.), it is possible to note that the connection with the land is decisive in the definition of indigeneity. Moving from the indigenous territory to urban centers can be a difficult step for young people who choose to do it. Data on indigenous life in urban centers reveals disparities between indigenous and non-indigenous residents in terms of access to public services and economic opportunities [64]. Urban indigenous populations are more vulnerable compared to non-indigenous people and are exposed to new dimensions of exclusion [64]. As a result, the Yshiro awareness of their vulnerability, the internalization of the problem and their fight (i.e., see QCL2 in Social Norms, values and beliefs a.) are included in what we categorized as "values and beliefs." They connect the community with their past, with the present and with the future. In this regard, the role of reciprocity in the community is central as it provides a good understanding of how resources are used and mobilized, as well as what role self-awareness plays [65]. It is against this background that Yshiro understandings of the relations between human and nonhumans, including animals, must be understood.

Even so, many young people leave home looking for a better life. In urban centers, they continue to be part of the Yshiro Nation, claiming identities. In this regard, it is interesting to note that in the case of Bahía Negra, the border can also be seen as a line to be crossed to find connections with the “other” in a non-dominant position, as we observe in the QCL3 (see Social Norms, local perception of development b.). The border is considered by colonial discourse as a discredited place, where changes occur and are provoked [43]. Such a concept itself is the space of the encounter, where otherness is identified. As a consequent correlation, we place this need to improve networking in what we categorized as "local perception of development". According to Blaser (2004), even with many opposite reactions, the developmentalist wave in Latin America, in theory, sought to extend socio-economic human rights to indigenous peoples in the 1960s and 1970s [9]. Within this context of agrarian reforms, relations between indigenous and non-indigenous organizations and movements were intensified.

With the consolidation of the transnational environmental movement, the idea that indigenous peoples have the right to support their own life gained a new importance. The sustainable development discourse provided a platform to build the argument that these societies are a critical resource in the global quest for sustainability. Since indigenous cultures often see themselves as embedded within ecosystems, TEK became a subject of study and preservation interest [66]. At the same time, when industries and governments realized how difficult negotiation with a large number of local communities could be, they began to rely on NGOs to communicate, consult, and implement programs. Thus, civil society organizations eventually performed hybrid functions, serving multiple purposes and shaping, along with state and market organizations, society [67]. In this scenario, Blaser (2004) argues that indigenous organizations are inside and outside not just a civil society but also the state and markets [9]. New alliances among social movements became possible. Networks of exchange and solidarity are strengthened by the world with the potential to break through emerging governance structures. Statements QCL4, QCL5, and QCL6 (see Social Norms, local perception of development b.) show how marginalization operates in the Yshiro community and their development. With limited resources, farm life is not attractive to young people. Nonetheless, there is a wish to gather better and further knowledge in farm practices, including those in industrialized agriculture.

Extractive industries can also be a pull factor for indigenous peoples, with diverse outcomes and, despite many negative experiences, there are many cases proving that the interests of extractive industries and those of indigenous peoples are not always mutually exclusive [64,67]. However, Western indicators of well-being can condition the understanding of situations and the needs of indigenous peoples. It is agreed that a broader notion of development may allow indigenous societies to pursue their own paths of self-development, strengthening their autonomy, reducing vulnerabilities, and promoting the sustainable management of their environments, resources, and knowledge. As for our case, the Yshiro development can only occur if their voices become heard, their decision-making space widens and their abilities to act are understood.
Statements QCL7, QCL8, and QCL19 (see Social Norms, community representation c.) reinforce the need to cope with the current lack of recognition (“community representation”). Many indigenous groups are still structurally excluded, which limits their ability to contribute economically and to affect public policies. For instance, in the case of indigenous women, in which gender and ethnicity categories overlap, double discrimination arises [47]. From the initial proposition of this article, “The Yshiro have a strong bond to land therefore are the ones most likely to preserve it or use it in a sustainable way,” we ask how to build a community-based governance model based on the Yshiro Nation. We see in QCL10, QCL11 statements regarding the Yshiro vision of human/territorial rights and the State (see Social Norms, community representation c.). The Yshiro community representation is being threatened by extractive policies promoting land speculation at their own cost, without performing, among other things, the appropriate prior consultation procedures (i.e., see Appendix A).

Yet, as the need for a new epistemology of development becomes urgent, we must also consider that the market economy and its concomitant forms of consumption, labor organization, and monetary exchange have penetrated indigenous families, communities, and territories for many decades. By promoting changes in identities, the creation of conditions for market inclusion is an important element for reducing vulnerabilities in rural areas as well as including TEK in sustainable development projects. The recognition of the central role of institutions outside rural and indigenous communities is a key learning notion of conflict management strategies [20]. Thus, new spaces and mechanisms of equitable land use and distribution, in which groups of civil society will participate in this decision, can be created.

5. Conclusions

This study investigated community-based governance models for sustainability in the context of Paraguayan wetlands. It particularly focused on the struggle for recognition of indigenous peoples (e.g., identity, land and rights) that involves many sectors of society within a complex arena, crossing boundaries among state, markets, and civil society. After observing problems, such as marginalization by the impact of land grabbing and inequitable access to land, from the Yshiro community leaders’ discourses, a second step is to encourage strong governance that self-determination requires. The findings suggest that community-based governance is constructed by the Yshiro relation to land (e.g., TEK) and their self-organized group (UCINY), as well as highly threatened by the impact of the national neo-extractive economy.

The empirical results reported herein should be considered in light of its main limitation that is the degree to which the research tends to generalize. For example, our most consistent set of data regarded local perspectives. Thus, those results (also due to the lack of comparisons with other case studies or other communities) might not translate or be transferrable to a broader context. However, based on our research scope, we present a case where similar research is scarce.

The following three final remarks aim to offer a concrete example of findings that can be compared and used for similar cases and socio-environmental contexts.

The first remark is about the Yshiro cultural and identity bond to land and its sustainable use. The non-normative objective of the adopted approach in this article is the empowerment of social actors and their territorial organizations (e.g., UCINY). In a democratic context, participatory organizations must be able to ensure that the rights granted to citizens, according to the adopted normative or constitutional frameworks, are effectively implemented. Empowerment (or resistance) arises from the possibility that the rules of the game are not imposed “from outside” or “from above,” but rather constructed, modified, and monitored by the territorial social actors and their organizations [44,68]. In principle, public agencies can “nominally” recognize the rights of citizens, but in practice, due to differences in power, it is possible that social actors (and, in particular, those from the most vulnerable and powerless territories) are not able to exercise them.
The second remark regards the impact of the extractive natural resource-driven developmental push. A myriad of natural resources that form the Pantanal eco-region are embedded into the indigenous identity. The destruction of the environment will cause the disappearance of local and indigenous communities, identities, as well as their knowledge (e.g., TEK). The case of the Yshiro and its governance model is emblematic as they have played a role of subalternity since the 19th century within their cultural spatial context (e.g., privatization of public lands, etc.). As stated by Green [18]: “the importance of spatial aspects within the politics of natural resource management, and emphasize that the socio-politics and power dynamics of CBNRM are both shaped by and continually re-shaping the scalar configuration of power (p. 95).” The Paraguayan state, moved by the need of the global market, promoted the development of extractive activities aimed at international markets, directly harming the territorial rights of rural populations and, in particular, indigenous populations and communities. Strengthening the role played by the State in the design and implementation of public policies should not be in conflict with the need to propose fundamental changes in their legal-political structures at different territorial scales (e.g., sub-national scales, etc.). From the perspective of strengthening the territorial and identity rights of indigenous populations (e.g., the Yshiro), one of the most urgently needed restructurings is to increase the capacities of subnational governments to design and implement public policies relevant to their respective areas [44]. At the same time, they must intensify their links with civil society organizations at different scales. Therefore, it is important to review the bureaucratic-vertical paradigm of government, which means taking into account litigation as well as a legal-political form of defense of human rights “from above,” as well as natural resource practices (e.g., TEK) by the populations and communities “from below.”

The third and final remark argues that the UCINY can be considered as a model of community-based governance. Since the 1990s, in Paraguay, various types of civil society organizations and social movements have emerged as important actors in the restructuring of governance institutions (economic, social, and environmental) across territorial scales. The assumption is that when local populations participate in the processes of economic transformation and are well informed, they tend to demand accountability for the issues that concern them, which will ultimately increase the quality of governance. However, citizen mobilization through isolated organizations is not enough: social networks (possibly moved by the Yshiro concept of reciprocity) are essential for achieving the objectives set by the sub-national territorial organizations and guarantee, through social mobilizations, that governments and markets respond to the needs and demands of citizens. This may be a step toward giving real content to community-based governance and CBNRM, thus empowering and moving beyond political and social constructions (e.g., values and stigmas, etc.).

In addition to the reaffirmation of identities and resistance, many structural changes need to happen (e.g., social/economic standing of indigenous communities to contribute to TEK and cultural survival), since indigenous communities are clearly embedded in post-colonial settler relations in multiple ways. As for the findings of this work, the role of the developmental strategy of extractivism is having negative impacts on the equilibrium of local governance and cultural identities. Likewise, the historical role of identity of the Yshiro community should be included in dialogues of sustainability for its intimate bond to land and its entrenched connotations (i.e., yrmo). Barth [37] argues that “categorical ethnic distinctions … entail social processes of exclusion and incorporation whereby discrete categories are maintained despite changing participation and membership in the course of individual life histories (p. 10).” From this perspective, the UCINY can be considered a model of community-based governance for Paraguay in order to develop sovereignty among the Yshiro community.


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## Appendix A

### National Level

**Constitution:**

- **Part I**
  - Of fundamental declarations, rights, duties and guarantees
    - **Title I**
      - Of the fundamental declarations
    - **Chapter V**
      - Of the indigenous peoples
        - **Article 62**—indigenous peoples and ethnic groups
        - **Article 63**—of the ethnic identity
        - **Article 64**—community property
        - **Article 65**—the right to participation
        - **Article 66**—education and assistance
        - **Article 67**—exemption
    - **Chapter VII**
      - Of education and culture
        - **Article 73**—the right to education and its purposes
        - **Article 77**—teaching in maternal language
        - **Article 81**—of the cultural heritage
        - **Article 83**—cultural dissemination and tax exemption
    - **Part III**
      - Of the political ordination of the republic
        - **Title I**
          - Of the nation and the state
        - **Chapter I**
          - Of the general declarations
            - **Article 140**—languages

**National law and regulations:**

- **Law No.904/81:** Statute of the Indigenous Communities.
- **Laws 137-143-145** on supremacy of international or regional legal order.

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