

Sustainability of aboriginal fishing communities of the Bermejo River (Salta, Argentina): needs of improving the legal framework and governance conditions to retrieve and secure its ownership of fishing rights

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Abstract

The basin of the Bermejo (Argentina) has several artisanal fisheries where exclusively indigenous ethnic groups operate. For these groups, fishing represents a traditional ancestral practice that ensures food security. However, under current conditions, the management of fisheries does not allow fishers to obtain the necessary social and economic benefits, because the activity is considered only as a palliative - something to reduce the poverty that afflicts indigenous communities, rather than as a way of life that enables these communities to improve gradually their well-being. The regulations consider fishing by the indigenous communities only for subsistence and not as a commercial activity. This misunderstanding strongly limits the fishing quotas, prevents fishers from using motorized boats or more efficient gears, prohibits the sale of fish in legal form, and eliminates the opportunity to add value to the catch. In addition, closure of access roads that cross between farms creates serious impediments to access to fishing sites, preventing the passage of fishers who must travel long distances to get to the river. Given that these fisheries also have firmly centralised and top-down management that precludes the participation of non-State actors, it is critical to incorporate regulations that are oriented towards fisheries ecosystem management, looking at criteria and governance processes aimed at ensuring the legitimate rights of indigenous fishers, preserving tenure rights, and improving livelihoods in these communities.

Keywords: inland fisheries; indigenous population; local; capacity; government

1. INTRODUCTION

1.1 Description of the fishery

The Bermejo River is one of the main tributaries of the Paraguay River, which represents, at the same time, the largest tributary of the Paraná River in the Rio de la Plata basin. Fisheries of the Río Bermejo in the province of Salta occupy a corridor of approximately 150 kilometres (km), which encompasses the cities of Embaración and Morillo (Figure 1).

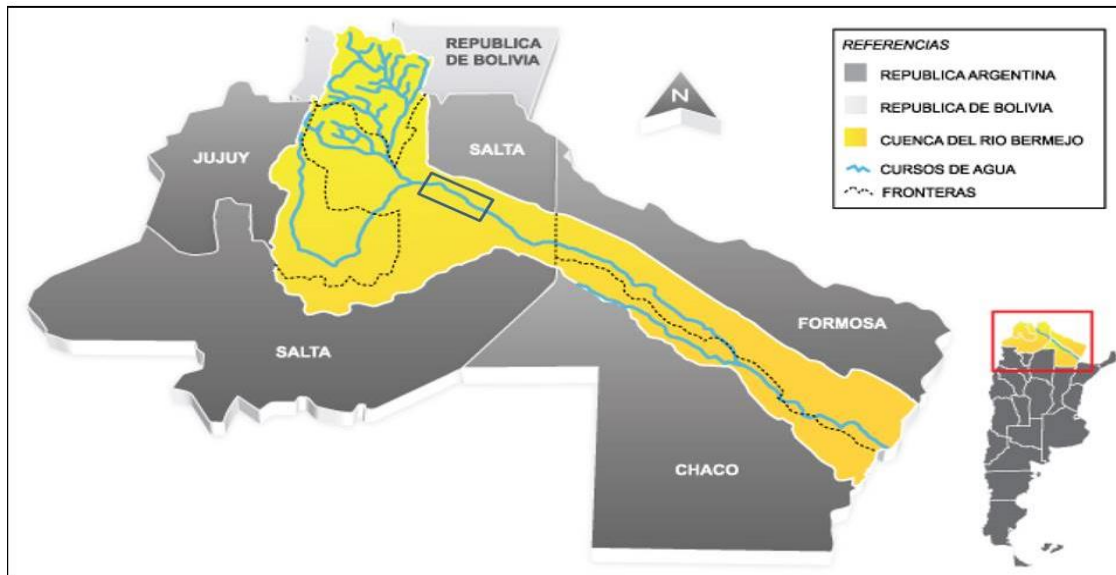


Figure 1. Map of Bermejo River. The black rectangle locates the study site.

Source: Map adapted from Fundación Nuestramar <http://www.nuestramar.org/fundacion>.

In this section, the river enters a plain forming meanders, side channels and extensive beaches whose configuration changes constantly. This generates numerous arms or secondary channels, too. The study area is inhabited by almost 28 indigenous communities of Wichi, Guarani and Toba ethnicities, of which 50 percent lives in the town of Embarcación and its nearby area, thus at some distance from the River (Figure 2). Four thousand five hundred families live in this corridor, and about 75 percent of indigenous fishers belong to the Wichi ethnic group, while 14 percent are Guarani.¹

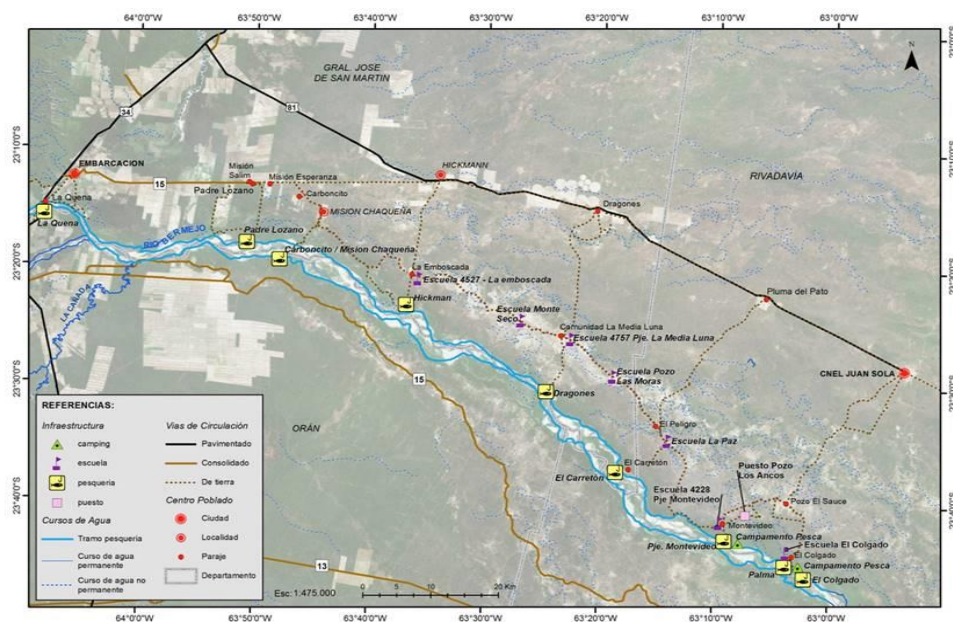


Figure 2. Location of indigenous communities.

Source: Adopted from Serman y Asociados, 2017.

¹ Source: Regidor et al. (2007)

The white catfish (*Pimelodus albicans*) is the preferred species (44%) for the indigenous communities, as it is easy to capture with hooks, and serves as meat without bones. The second preferred fish (28%) is the sábalo or streaked prochilod (*Prochilodus lineatus*), which has a higher market price.

1.2 Economic contribution and social implications of the fishing activity

The indigenous populations of the Chaco region have a subsistence economy associated with fishing, hunting, seasonal agricultural, forestry activity and the manufacture of handicrafts, supplementing income with government subsidies (pensions, family allowances, etc.). In some cases, they get temporary jobs to develop work on farms associated with the harvest of beans, bamboo, etc. for several months in other areas of the province. In the more urban communities, there are community members who are blacksmiths, carpenters, or construction workers. These communities, in particular, those located in rural areas, have a high degree of illiteracy that can vary between 10 and 30 percent, whilst also living in precarious conditions with poor access to essential services.

The indigenous communities engage in fishing between 30 percent and 90 percent of their time, influenced by the possibility of diversifying their livelihoods.² In some communities, fishing is practiced with unmotorized wooden boats about 5 - 7 meters (m) long, while in other cases where the community does not have access to boats, fishing is done on foot. The gear used includes harpoons, hooked lines, throw nets and encircling nets, depending on the species and time of year. The encircling nets are used only when there is a boat and are a maximum of 50 m in length and 5 m in height. There is a minimum aperture of 11 centimetres between knots. The fishing trips are made in groups, (usually of 3-4 fishers) and each fisher can make two trips per week. The activity develops throughout the year but is significantly reduced during the floods of the river that take place between January and March. Therefore, fishing takes place mostly in autumn, winter and spring. The duration of the fishing day may be several hours, though in many cases the fishers remain at fishing sites for several days, depending on the distance to their place of origin. Fishing in the river is conducted exclusively by men, whilst women work in the post-harvest.

Even though no studies on the consumption of fish by indigenous communities exist, it's estimated that fish contributes significantly to food security. On the other hand, and despite the fact that fishers do not have legal authorization to market the fish, when fishers do have a surplus of catch it becomes an object of barter; for sports fishers and in urban centres such as Embarcación alongside basic goods and non-perishable food. However, the fish also enters the commercial circuit through intermediaries who, in exchange for transporting fishermen to certain fishing sites, take the fish as part of the payment for these services and then resell it to fishmongers of Orán. Sábalo is mainly sold in the La Quena, alongside the Bermejo River, where there are several fish restaurants for tourists and drivers. The fishers are strongly dependent on these intermediaries due to the prohibition to sell the fish legally on their own. The fish caught and not delivered to sport fishers is gutted in the river without any processing (except some salting), before being taken to the communities of origin of the fishers.

2. MANAGEMENT OF THE FISHERY AND RIGHTS-BASED APPROACH

2.1 Management of the fishery

The management and administration of the provincial fisheries system are centralised and top-down, meaning fishers do not have organized participation in management or any legal mechanisms for conflict

² Source: Alderman et al. (2007)

resolution. In case conflicts among users of the same resource do emerge, the enforcement authority resolves them unilaterally. The absence of regional delegations in the province limits interaction with fishers. In addition, the collection of statistical information on the fisheries is not done – either directly, or indirectly through dialogue with fishers. Current regulations that stipulate there to be only two weekly trips per fisher also limit catch to 15 sábalo, ten catfish, three bogue, one dorado, and two surubías per tour per fisher.

2.2 Brief history of former rights-based approaches used in the fishery

Unlike with sports fishing regulations, legal measures for fishing for indigenous communities depend on resolutions issued by the Secretary of Environment of Salta and may vary according to the criterion of the enforcement authority. These resolutions decide on fishing quotas, minimum sizes, number and size of nets and boats that can be used. Although the indigenous communities are the only ones authorized for non-sports fishing in the territory of the province, their customary rights to go fishing are not recognized. Fishing is only allowed as a means of improving their life conditions and contributing to food security.

2.3 Rights-based approach: allocation and characteristics

Fishers must inscribe themselves into a fishing register and then wait for the corresponding inspection and approval of fishing gear. User rights reflect an ancestral relationship with the river and fishing, with the failure to recognize these rights ignoring the culture of fishing of indigenous people. The government view, of fishing, being a means of subsistence only (and not as a commercial activity of small-scale nature), strongly limits the possibility of improving social and economic conditions for indigenous fishing communities.

3. CONTRIBUTION OF THE RIGHTS-BASED APPROACH TO ACHIEVING SUSTAINABILITY

3.1 Sustainable use of the resources

There is no statistical data available on catches by the indigenous communities, but given the current regulation that strongly limits fishing effort, it can be estimated that these fisheries do not exceed 40-50 tonnes per month. Management can be understood as precautionary, given the impossibility of more accurately knowing catches and the unfavourable opinions held by many sectors of society with regard to fishing that is not sports fishing. The scarce equipment of fishers, including the inability to maintain a proper cold chain, prevents any expansion of the fishery.

However, there are estimates that suggest that the Bermejo River can provide higher yields without approaching overfishing. It is clear that the capture of subsistence fishing is comparatively small and does not justify the severe restrictions that impact the lives of the indigenous communities.

3.2 Economic viability of the fishery

In any case, the State does not have the necessary tools and resources to provide concrete support to indigenous fishers, in order to improve economic situations, fishing gear facilities, poaching impact control, and to enable added-value amongst fisheries products, which would improve marketing and reduce the dependence of collectors.

3.3 Social equality

There is a marked social inequality between the indigenous fishers and the sports fishers in the Rio Bermejo. The fact that fishing effort is highly limited and controlled for the indigenous fishers and that they are not allowed to sell their catch puts them into a very unfair position in relation to the transporters and other middlemen, who can easily exploit this situation.

4. MAIN CHALLENGES AND WAY FORWARD

4.1 Challenges for the fishery

The main area of recurrent conflicts relates to the restriction of access to the river because of road cuts made by landowners, forcing the fishermen to make a wide detour to get to the river. This also demands that some fishermen must remain on the shore for several days with the consequent damage and deteriorating quality of the fish by the inability to maintain a proper cold chain. The solution for fishermen is selling fish at a very low price to collectors who carry fish to the neighbouring cities.

The uncontrolled development of sport fishing often generates territorial disputes as sport fishers often interfere with indigenous fishers in the use of the coastal area. There is a marked asymmetry in terms of controls, as subsistence fishing must have the approval to operate but there is no control over the arts and catches of sport fishers. In addition, while sports fishing is authorized to use motorized boats, the subsistence fishers can only use un-motorized boats, creating an unjustified inequality. There is also a serious problem of poaching.

In any case, one of the most obvious problems is the lack of regulations and governance aimed at improving the conditions of fishing communities. The provincial government, regardless of the demands or needs of the communities, sets both quotas and arts unilaterally. Legislation requires that the fishers use only rudimentary fishing gear. These criteria initially envisioned to protect the resource from possible overfishing and entry into the fishery of unauthorized external fishers, strongly limit the possibilities of improving the socio-economic situation of the indigenous fishers.

It is detected that subsistence fishing governance processes are poorly developed, compounded by weak cohesion among the different groups of fishers. Although there is an Association of indigenous fishers of the River Bermejo in Embarcación, this does not reach all the indigenous fishers. The lack of common leaders accepted by all communities hinders the Organization's function as a counterpart to the enforcement authority.

The weak organization of these communities generates conflicts between its members. This conflict is mainly between the more urban and more rural indigenous communities over the availability of fishing equipment (nets, hooks, boats, freezers). The enforcement authority, on the other hand, exhibits problems of hierarchy that weaken the interaction with other fishery stakeholders and limit the leading role it should have in the management of fisheries in the province of Salta. The absence of regional offices leads to sporadic contacts with the communities, too, particularly those more rural located east of Embarcación.

Beyond these issues, the view that fishing communities should be only oriented toward subsistence fishery becomes a severe impediment to promote policies of social development and improvement in the economic conditions of communities. The State should encourage, for example, the value addition to fisheries products in order to improve the benefits of fishing. The fishing system, on the other hand, appears deficient since most fishers lack the ability to implement or maintain appropriate cold chain or sell fish respecting the necessary sanitary conditions that force them to rely on intermediaries.

On the other hand, the fisheries legislation of Salta, with its top-down approach, does not provide any legal mechanism that encourages participation and consultation with fisheries stakeholders in order to integrate their demands. Centralized management impedes the possibility to have greater interaction

with the municipalities of the main fishing areas, so they implement mechanisms for bromatological and fiscal control of fishing, for the monitoring of the fishing activity and mainly to implement measures that promote tenure rights of fishing by indigenous fishers.

The main claims and needs of communities focus on achieving increased fishing quotas, gaining permission to market the fish, regaining free access to fishing sites and controlling poaching. It is required to move towards a broader view on the management of resources - by incorporating the human component and its interaction with the environment and implementing an ecosystem approach to fisheries.

4.2 Improving fishery sustainability in the future

The future of the fisheries for indigenous communities will depend on the degree to which its current governance and management can be modified. The indigenous fishing sector must be recognized as an artisanal fishery, where fishing functions not as a vehicle for self-consumption but also as a generator of income through legal and organized sale.

In this sense, the State should focus on the problem from a wider perspective, understanding not only the strict fisheries aspects but also the social and economic sustainability of the activity. On the other hand, and consistent with these policies, a thorough review and update of the legal framework governing these fisheries are required as a basis to implement measures of management. These policies need to replace the current conventional approach with an ecosystem approach to fisheries. The use of the ecosystem approach to fisheries has notable advantages, encouraging the participation of the fishing actors, optimizing the use of fishery products and reducing the impact of fishing. It will also promote the improvement of governance and equity, strengthening the livelihoods and welfare of fishermen.

Finally – and no less importantly - legal improvements should facilitate governance and facilitate the recognition of tenure rights of fishing as the main axis so that the fishing communities of the Bermejo River can develop sustainably and improve their quality of life.

4.3 Lessons learned

There are several lessons from this experience:

- The declaration of indigenous fisheries as pure subsistence fisheries leaves these fishers in the hand of intermediaries, who take advantage of the fishers.
- Management needs to be ecosystem-based and carried out in a dialogue with all stakeholders.
- Discrimination of indigenous fishers versus sport fishers has to be avoided by the government agencies.
- The inability to sell fish leads to huge post-harvest losses, as no value addition can the fish products can be achieved, including cold storage and the use of ice.
- The traditional rights of fishers to the access of rivers must be guaranteed by law, preventing land-owners from cutting off traditional access roads.

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