

Law, public policy and customary use of fisheries in the Peruvian Amazon

Relationships between the legal system and the customary framework in the Pichis River, Peruvian Amazon.

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Introduction

With increasing development in the Amazon, a rise in the demand for land, oil and gold but also fisheries and forests have increased pressure over natural resources and accelerated the dynamism of economic demands over the natural environment. This changes place demands on the various levels of government but also at the level of individual land holdings. How to attain development while conserving the environment is a tremendously complex task, especially in developing countries where formal regulations and institutions are not well established and enforced, particularly in the Amazonian frontier where pre-capitalist formations coexist with the modern economy.

The Pachitea basin, in Peru's central Amazonian region, populated by indigenous people, Andean colonists, European descendants and mixed riparian peoples extends over two million and nine hundred thousand hectares, comprising two regional governments, two provincial municipalities and seven municipal districts. The predominant indigenous population depends heavily on fisheries for the protein intake. Land tenure in the area is not only ruled by the Peruvian legislation but also influenced by customary tenancy arrangements

Despite its importance as a source of food and health, fishery resources are declining due to accelerated human pressures, such as overfishing, riparian deforestation and water pollution caused by agricultural pesticides and fertilizers. These processes will accelerate as increasing road development will continue to open access to the last remaining forests and tributaries. However, at the local level our research on subsistence fisheries management has found local arrangements that demonstrate "the processes of interactions between the actors involved in a collective issue that lead to decisions and the formulation of social norms" (Hufty 2007, 12). We sense, in this case, that mapping can be a useful tool to evidence governance in the interactions of multiple resource users.

While promoting commercial fishing attracts more attention, mostly among economists and government officers, there has been little discussion on subsistence fisheries and local customary arrangements that can promote or hinder coexistence of dynamic landscapes of property (Coward 2006). We aim to contribute with this research to the understanding of subsistence economies whose survival is so relevant for the vast majority of the Amazonian indigenous population.

We have gone beyond the analysis of the legislation in order to understand the particularities of policy implementation at the regional and local level of government, the relationship between local customary practices and the legal and institutional

framework, and the challenges of fisheries policy development in order to attain sustainability. We have looked for actors¹ on the landscape in order to learn the nature of their interactions. In this sense we have found norms² developed between different resource users (Andean and Amazonian indigenous peoples and some people from the Coast) in order to regulate access to beaches, gorges³, islands, and the open river, and eventually also regulate compensation for providing access. Our goal is to visualize local customary arrangements as a base from which help build environmental governance through multiple stakeholder participation on fisheries management and regulation. We see the Pichis basin as an example of a diverse and complex approach to the management of fisheries. Some populations as those living in the Apurucayali River have decided to ban fishing. Others as those of the Neguache and Nazarategui Rivers have remained open to subsistence fisheries and eventually to some incursions by commercial fishermen, mainly divers. However, this management system is not fully sustainable but requires readdressing some of the conditions under which fishing is taking place. From a formal point of view it is easy to say that dynamite, toxins and chemicals are banned when in fact these banned techniques are fully in use in the rivers. Our findings show an attempt by neighbors with diverse interests to built governance and manage some of the conditions under which fisheries operate. We feel that the way out of current non compliance with legislation is to assume a step by step approach to expand current control in some gorges to actual enforcement of a diversity of rules along the Pichis River and tributaries, allowing space for conservation and sustainable use.

The Question

Our aim is to understand the legal and customary framework in which the local subsistence fisheries take place in order to contribute with proposals for a sound environmental management of this activity. Our main questions are:

1. How specific norms at the local level are contributing to reduce conflict in the access to fisheries.
2. What are the implications of these norms for governance and for the development and reform of resource use practices?
3. What local and regional, political economic and discursive conditions explain the emergence of governance around fisheries management?

¹ '...The postulate here is that all the stakeholders (individuals or groups) are included in the analysis, whether "formal or informal" (recognized by the authorities or not), without prejudice.' (Hufy 2007, 17).

² '...Whenever there is a society, agreements and decisions between actors, as a consequence of governance processes, lead to the formulation of norms (generally defined as the collective expectations regarding what is considered appropriate behavior in a given society)...' (Hufy 2007, 15).

³ From the Spanish *Quebrada*. Usually a water flow that goes into a river.

4. How decentralization can contribute to strengthen governance emerging from the grassroots?

The Pichis River

Our aim was to concentrate in the detailed analysis of subsistence fisheries in the Pichis River in order to understand the operation of the legal and customary arrangements for regulating access to fisheries. According to the GAF a first phase of our research shall allow for multiple stakeholder input into the definition of the problem to be analyzed.⁴ The current social context of the Peruvian Central Jungle, where the study area is located, is the result of a long process of historical change that involved the arrival of European settlers and Andean colonists starting in the XIX century, which in turn displaced the local Ashaninka population. Puerto Bermudez is the capital city of the district. It is located at 280 m.o.s.l. The district of Puerto Bermudez was created by Law 13014 of June 17, 1958, during a second small rubber boom. In 2002 Puerto Bermudez had a population of 20,582 people over an area of 10,988.1 square kilometers with a population density of 1,9 inhabitants per square kilometer (UNDAC 2007). The district of Puerto Bermudez has 123 settlements composed of annexes, native communities and agrarian units.

The GAF tells us that the need to solve problems leads to the definition of norms or agreements, thus we chose to carry out an interview on 16 different communities looking for those that might have any rules in place regarding natural resources or fisheries in particular⁵. In the first visit to the Nuevo Nevati Native Community and the settlement of parcel-owners Anexo Nevati people told IBC that they had some rules while the members of the Santa Isabel Native Community and the Boca Samaya Agrarian Cooperative said to have no rules regarding fisheries. We, finally, chose to study four settlements in the Neguache River, a tributary of the Pichis River. These settlements belong to the Municipality of Puerto Bermudez, in the Oxapampa province in the Department of Pasco. These settlements are:

- The Ashaninkas Native Communities of Nuevo Nevati and Santa Isabel de Neguache;
- The individual parcels of the Ashaninkas of the Adventist faith of Anexo Nevati, and
- The colonists of the 'Israelite' faith⁶ of Agrarian Cooperative Boca Samaya.

⁴ 'This phase is based on the postulate that any problem is a social construction. What is at stake may be completely different for each stakeholder involved in a governance process. Each protagonist has his or her own understanding of what is at stake (including the observer, the person or group using the GAF to make a diagnosis). This is explained by the position occupied in society and also by stories, cultures, orders, objectives and specific discourses, which may be qualified as "universes of signification". Any social interaction, including conflict itself, is a meeting of these universes. In undertaking a GAF study, we must above all accept this plurality of visions, which involves taking a step back in our perspective as observer or stakeholder. It is a fundamental step for a realistic analysis and possible solution.' (Hufty 2007, 14-15).

⁵ What is at stake is above all social norms, that is, firstly, the rules of the game at an initial level, and the rules which determine who defines the rules of the game and how, at a second level. Whenever there is a society, agreements and decisions between actors, as a consequence of governance processes, lead to the formulation of norms (generally defined as the collective expectations regarding what is considered appropriate behaviour in a given society). (Hufty 2007, 15).

⁶ Ezequiel Ataucusi funded the Peruvian Israelite Church of the New Universal Deal. A church whose members are mainly migrant population that decided to establish colonization settlements in the Peruvian Amazon.

.1. Nuevo Nevati.

The Ashaninka Native Community of Nuevo Nevati is located in the right river bank of the Neguache River over 2,836 hectares. It was created in 1978 on a land grant from the Adventist Mission located in Redención Nevati to some of the previous members of the Adventist Mission to be titled as a Native Community. They currently have 70 Ashaninka households with a population of 304 people. Their main activity is agriculture and subsistence fishing. Their location is close to Puerto Bermúdez thus they have a full educational program leading up to secondary school. However despite the influence of education they maintain their internal social structures and apply their customary law to the management of local conflict.

.2. Anexo Nevati.

This is an Ashaninka settlement also originated from the Adventist Mission at Redención Nevati. These Ashaninkas decided to be titled in individual parcels in a piece of land donated by the Adventist Mission. They are currently applying for land titling.

It is located in the left bank of the Neguache River over approximately 100 hectares. It has a population of approximately 235 people. Their main activities are agriculture, fisheries and logging. They are socially rooted in the Ashaninka tradition; however the public school and the Adventists religion have given them an understanding of the formal system of rules of the 'national society'. This is a main reason for their request to be titled in individual parcels of land. They do not have a communal assembly but a Lieutenant Governor.⁷ They apply the formal legal system but also the customary. In order to solve conflict they request the mediation of the Lieutenant Governor and the influence of their religious beliefs. Threats and rape are directly dealt with the police or the judiciary.

.3. Agrarian Cooperative Boca Samaya.

The Agrarian Cooperative Boca Samaya was established by Ezequiel Ataucusi on May 15th, 1972, over an area of 1,046 hectares. All members share the faith of the Evangelio Association of the Israelite Mission of the New Universal Deal [Asociación Evangélica de la Misión Israelita del Nuevo Pacto Universal – *AEIMINPU*]. It is located on the left bank of the Neguache River, South East of Puerto Bermudez. The population is mainly comprised from migrants from the Andean regions of Junin, Huancavelica, Apurímac, and Ancash but also from the coastal regions of Ica and Lima.

The members of this faith base their social and political life partly on their religious beliefs and partly on the legal system. Their daily activities are a mixture of rights and duties from the legal system and their religion. Agriculture and cattle ranching are the main activities, together with commerce and river transport. Fisheries are not important as a source of income or protein.

.4. Comunidad Nativa Santa Isabel de Neguache.

⁷ A Lieutenant Governor is a public officer appointed by the Ministry of Interior among the local people of a settlement. Native communities instead have a Chief and run a communal assembly as their highest decision making body.

It is located on the left bank of the Neguache River. Its land title was granted in 1975 over an area of 1,284 hectares. The Ashaninkas of Santa Isabel are traditionalist in their economic and social life. They wear their traditional suit, the *Cushma*, apply their customary law to their members, and their main activities are subsistence agriculture and fisheries.

The sanctions applied by the authorities involve forced labor, apologies, returning goods among others. They reject the Christian faiths and prefer to maintain their culture. Apparently they have had previous bad experiences with missionaries.

Drawing together a resource use map

We share with Hufty (2007: 12) the idea that 'Each society develops its own methods of governance, its systems for decision-making or conflict resolution between its members, norms and institutions'.⁸ Hufty suggests that to study governance we require a methodology that serves as a reference for the observation process. And this analytical framework 'must be realistic, interdisciplinary, comparative, generalisable, reflexive and operational' (2007: 12). Thus we chose to use a resource use map as a tool for understanding the customary framework of subsistence fisheries. This is an interactive tool that allows gathering information and drawing it on a map, encouraging feedback among different groups (age, sex, activity) within the settlements researched. Our aim was to understand how fishing occurs in the local context, whether the fishermen identify differences between different areas of the river (gorges, beaches, islands, river branch and open river) for fishing. They could be zoned by availability of resource or by fishing method.

The facilitator used the following questions as a guide through the workshop:

1. Where did we fish? / Where do we fish? / Where will we fish?
Do people identify differences between gorges, island, lakes, beaches, river branch, or the open river? Which are those differences? Are they related to availability of fish or fishing technique or other?
2. How do people fish? (Fishing tools, men, women children) Do foreigners take part?
Are there any differences observed about periodicity and seasonality (summer, winter)?
3. Do people use land zoning for different river areas (gorges, island, lakes, beaches, river branch, or the open river)? Explore whether there are differences between different local users (areas with exclusion, family areas, and all access areas)?
Are there any differences between local and foreign users?
4. Are there any agreements, rules, regulations or values in place while fishing?

To draw the maps we organized workshops in the four settlements visited. All participants received a color pen. We looked for subsistence fishermen, women and

⁸ '...It can also be analysed in a non-normative and non-prescriptive way (although from an epistemological point of view, any theory or element required for analysis is based *in fine* on values)...'

children in order to have a clear vision of resource use in the area in the past and currently. The audience was gathered and the facilitator explained the aim of the meeting and motivates the audience to tell stories or comments about fisheries in the area, currently and past. A paper sheet was laid on the floor and color pens were used to draw on the paper sheet the references made by the speakers. This drawing exercise was a collective task where multiple interactions allowed for better information gathering.

The subsistence fisheries in the four study sites.

The local fisheries are mainly subsistence fisheries with a very small surplus directed to the market (in this case the city of Puerto Bermudez). Occasionally once every semester commercial fishermen from Pichanaki or La Merced arrive to the area with large nets. The local commercial fishermen in Puerto Bermudez are 8 people. Most of commercial fishing takes place in the Nazarategui River.

Once we visited the area it became obvious that almost all communities had rules such as Santa Isabel and Anexo Nevati where the rules have been written in their minutes or as in the case of the implicit rules set up by Boca Samaya and Nuevo Nevati, where the authorities have offered to carry out management measures that have not been enforced.

It is also important to recognize that the area is a mosaic of public property, private property and communal property, with indigenous peoples using the last two types of tenancy. In this context we found some customary rules regulating access to fisheries between indigenous fishermen and colonists became apparent. These rules serve two purposes:

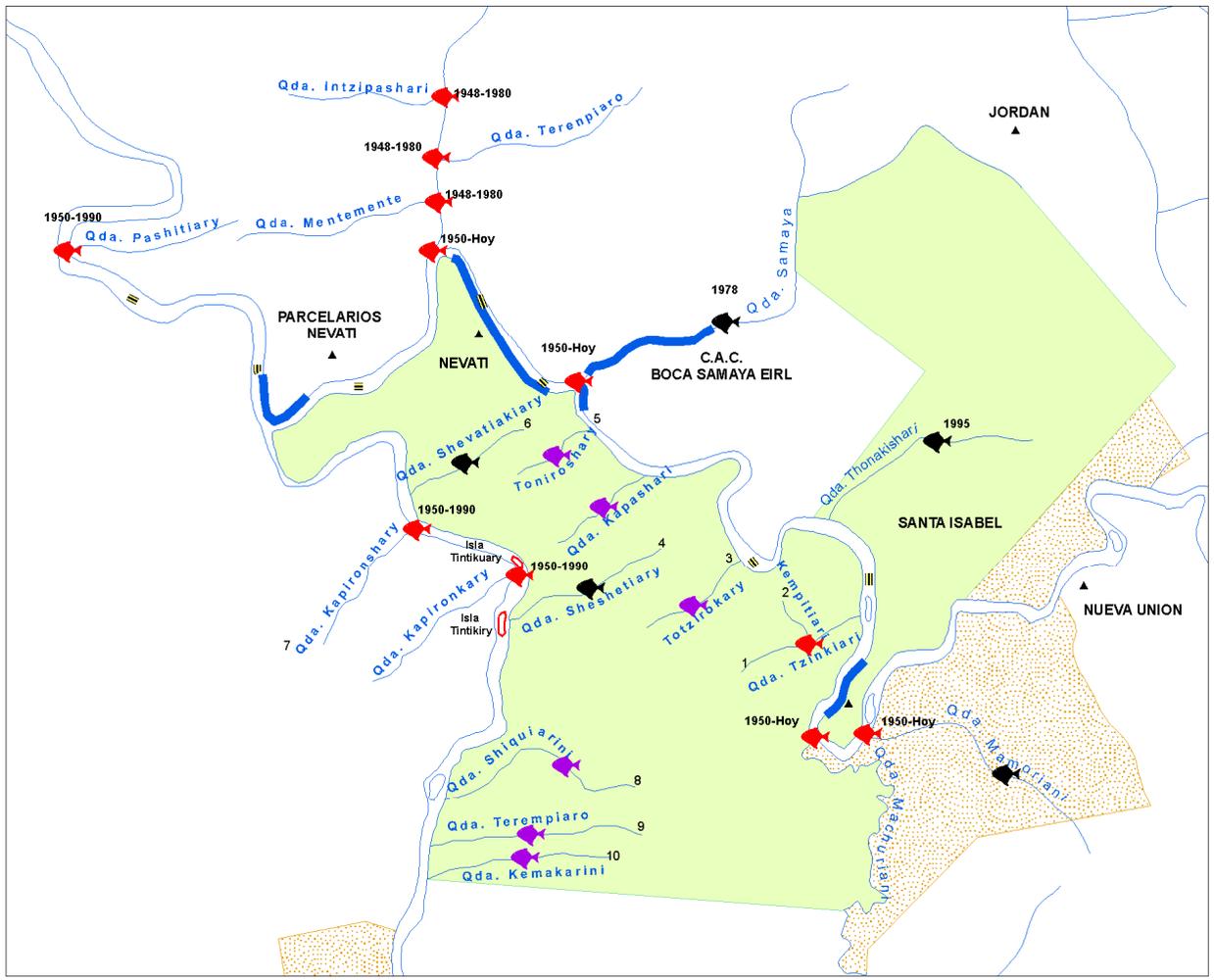
1. Either banning fishing with Barbasco (*Rotenona* sp) or with dynamite, or
2. Allows fishing with Barbasco if the fisherman provides a 48 hour notice to the owner of the land for him to move his cattle to another place in order to avoid that it drink water with Barbasco which could harm the cattle.

These customary rules aim to regulate the use of Barbasco and dynamite. Both techniques are expressly banned in the national Peruvian legislation; however both techniques are widely used in the area. In a situation in which the some police are accused as responsible for selling dynamite locally. Thus the establishment of local rules to ban or to allow fishing with Barbasco under previous notice is an evidence of the effort of the local people to achieve some control of natural resources management at least in the land under their jurisdiction. Thus this alternative rule making is an adaptation of formal positive rules, traditional rules and religious beliefs, which aim to answer to a changing and challenging reality. The merging of these customary rules from diverse origins has been characterized as typical of the “interlegality” that occurs in situations of juridical pluralism (Santos 1995; Chávez y García 2004).

It is important to notice that these rules are applied to the main fishing areas which are currently in use. As we can see in figure 1, Main fishing areas until 1990, the pressure of fishing has depleted some areas that have been abandoned; and although fisheries

are important for the indigenous people, none of the communal areas contain relevant fishing areas. Figure 2, shows the current main fishing areas and emphasizes the importance of the habitat where a tributary connects to the bigger branch of the River. These are the cases where the most important gorges join the river. Three of these gorges are enforcing a ban on dynamite and toxins while another gorge allows such techniques under request. These permits are almost usually agreed between indigenous peoples living in the community and aiming to fish in a gorge next to an individual parcel of land of a colonist or even a parcel titled Ashaninka. The gorges with an enforced ban are located in Anexo Nevati (parcel titled Ashaninkas), Santa Isabel (Ashaninka Native Community) and Boca Samaya (a cooperative of colonists of the Israelite faith). As the GAF proposes norms guide actor's behavior, as the case study shows in an area of widespread non compliance with the law, some actors enforce through collective action rules to help solve conflicts among resource users.⁹

⁹ '...Norms guide the behaviour of the actors and are modified by collective action, as "classic" institutional economics teaches us (Commons 1934). Norms are based on values or beliefs (the sense of what is right is right or wrong) and includes prescription (what one should or should not do). They influence the behaviour of the agent and are modified by collective action. When the norms recur, they are institutionalised. They can then be studied as institutions, which involve a theory of institutions. Our choice is based on a "classic" and evolutionary approach (T. Veblen, J.R. Commons, etc.).' (Hufty 2007, 15).



LEYENDA

- Zona Frecuente de Pesca en boca de quebrada por años
- Pesca eventual dentro de quebrada (por ciclo estacional)
- Pesca Frecuente dentro de quebrada (quebradas que no se secan todo el año)
- Pesca frecuente en isla (Desaparecieron en los 80)
- Pesca frecuente en la orilla
- Pesca frecuente en río
- Centro Poblado de Comunidad Nativa Titulada
- Rios y Quebradas
- Comunidades Nativas Tituladas
- Parcelas Individuales

Nombres	
1	Tzinkiari = Qda. para niños
2	Kempitiari = Qda. de la carachama
3	Totzirokary = Qda. del caracol
4	Sheshetiary = Qda. de Shansho
5	Toniroshary = El aguajal
6	Shevatiakiary = Qda. de conchitas
7	Kapironshary = Turbio
8	Shiquiarini = Qda. de las moscas
9	Terempiaro = Qda. de muchas vueltas
10	Kemakarini = Hichadito, represadito

Mapirishari Creek.

Since the establishment of the settlement, the community decided to ban fishing on this gorge with dynamite or Barbasco. They constantly enforce the ban by overseeing the area as they carry out daily activities such as going to the farm or school.

Samaya Creek.

Since the creation of the Cooperative in 1972 fishing with Barbasco was regulated and required an authorization from the cattle owner, particularly for the neighbors of the Native Community of Nuevo Nevati and their use of Barbasco.

Mamoriani Creek.

This a fishing area mainly used by the Ashaninkas of Santa Isabel Native Community that live across the river. Since the arrival of a parcel owner to the mouth of the gorge a request of authorization to use Barbasco is enforced. The request of authorization allows the cattle owner to move his cattle and avoid that it drink any Barbasco.

Machuriani Creek.

It also located across the river from the Santa Isabel Native Community. Here Barbasco and dynamite have been banned since 2003 by the Native Community of Valle Carhuaz. A community member that lives in the mouth of the gorge has helped enforce the ban. The use of small nets and hook are allowed.

Thus we have found in the four sites of the study a customary arrangement which can be seen as a base to negotiate and establish a more elaborate system of vigilance to enforce bans and permits in the Pichis River. With this understanding of the situation we organized validation workshops in:

- Nuevo Nevati-Naranjillo (attended by those living in the upper tributaries: Neguache, Nazarategui and Azupizú) on June 27 and 28, 2007;
- Puerto Bermúdez (attended by those living in the middle section of the Pichis: Pichis, Anacayali and near the highway) on July 2 and 3, 2007;
- and in Cahuapanas (attended by those living in the lower section of the Pichis: Pichis, Apurucayali, and Chinchihuani) on July 5 and 6, 2007.

We found that all tributaries of the Pichis have similar bans and permits for Barbasco and dynamite in gorges of relevance for fishing. This is not a full management system but a fraction of it. These bans and permits have been set up by the force of contact and agreement between neighbors in the Pichis River. If we look at figure 2 we can see that these gorges that ban or require permits are areas of intense fishing and are located in the vicinity of land in individual parcels, thus the gorge follows the criteria of the main piece of land which is a private property therefore to cross over these areas to access and use the gorge the fisherman is require authorization from the land owner to fish particularly with risky means such as Barbasco.

The anthropologist (Pinedo 2007, 23) also found the existence of values and beliefs among the Ashaninkas that reinforce good resource management. The Ashaninka believe in Kiatsi, the father of all fish; as a figure that can punish overfishing or wrongdoing. As Hufty (2007, 16) proposes there are 3 levels of norms.¹⁰ In this research we observed (a) principles and values as the belief in Kiatsi; (b) the definition that land rules water (c) regulatory norms as the ban and permits in gorges.

¹⁰ 'Norms may be of three types, which themselves refer to different levels of analysis:

- Firstly, *meta-norms* refer to premises or principles, which guide the social contract in its widest sense, defining criteria and structural values.
- Secondly, *constitutive norms* define the organisational or institutional mechanisms related to the sectional operation of the object or scenario under analysis.
- Thirdly, *regulative norms*, or rules, define the rules of conduct which state what is appropriate, in the eyes of society, in terms of behaviour, what each person must or can do, and state positive (approval or reward) or negative (disapproval or punishment) sanctions.'

Table 1. Description of actors (Soria, Rodriguez and Summers 2008 based on Hufty 2007, 17)				
Category	Actor 1 Ashaninka traditional	Actor 2 Ashaninka Adventist	Actor 3 Israelite	Actor 4 Catholic
Formal level or category (organization of the State on a national, provincial, municipal level, non-governmental...)	Local	Local	Local	Local
Status (formal-informal)	Formal	Formal	Formal	Formal
Resources controlled (economic, cultural, relational, symbolic...)	Land	Land	Land, transport	Land and gorges
Beliefs or ideologies	Indigenous	Indigenous Adventist	Peruvian evangelist	Catholic
Modes of expression and action	Indigenous	Modern indigenous	Religious	Modern
Impact	High	High	High	High
Nucleus of formal and real responsibilities or functions covered	Fishermen	Fishermen	Gatekeeper	Gatekeeper
Space of intervention	River, beaches, gorges, islands and branches	Creeks	Creeks	Creeks
Position on the problem studied	Relevant	Relevant	Strategic	Strategic

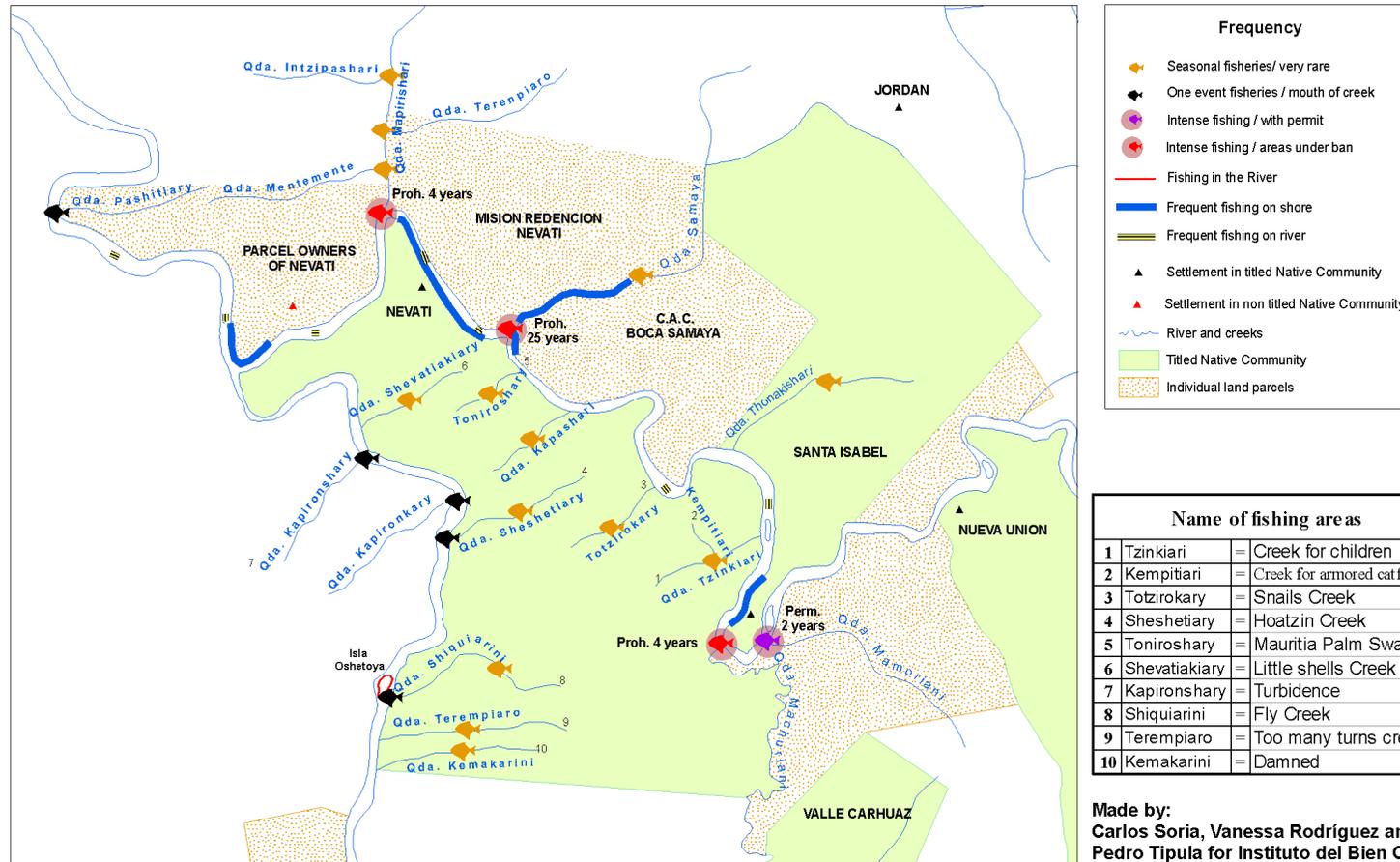
In this case all four actors are local. They have a land title and are thus formally recognized. They all control land but more importantly actors 3 and 4 control gorges with high importance for fisheries. All actors show a wide array of beliefs and ideology that are also represented in their modes of expression and action. The impact of all actors is high in regards to producing governance. While actors 1 and 2 are fishermen, actors 3 and 4 play more the role of gatekeepers ensuring that agreements are enforced. The nodal points where the interaction takes place are the gorges adjacent to land owned by Israelites and Catholic

land owners that require indigenous fishermen to request permission in order to use Barbasco on these areas. The process observed in this case is subsistence fishing by Ashaninka indigenous peoples in the Pichis River. All actors have access to land but the gorges with high importance for fisheries are located in the vicinity of cattle ranchers, usually colonists of Catholic faith but also Israelites. Thus the indigenous fishermen recognize the right of the land owner to regulate access to the gorges in his land. In other cases the ban is not the decision of the individual cattle rancher but that of a collective (Boca Samaya Cooperative and Valle Carhuaz Native Community).

The impact of Peruvian legislation and policy

Although article 88 of the Peruvian Constitution ‘...Guarantees property rights over land, privately, communally or another form of association...’ the other natural resources remain supposedly in the hands of the state. But concessions can be granted

Fisheries in the Neguache River after 1990



to use these resources. However, these concessions are only granted for commercial purposes, where the interests of small land holdings, indigenous peoples, ribereños and other rural population are only granted a temporary right. Thus, the view that those aquatic resources can only be held under public property affects the visibility of customary tenancy arrangements over some resources such as gorges, ponds and lakes.

The legislation (Ley de Aprovechamiento Sostenible de los Recursos Naturales and Ley General del Pesca and its regulations) makes a distinction between a commercial user and a subsistence user, thus the first receives a right that is exclusive while the second receives a right that is named preferential but in fact it can be extinguished by the granting of an exclusive right. Thus any successful effort to sustainably manage subsistence fisheries by local fishermen can be destroyed by the granting of a license to a commercial fisherman.

The legislation refers to renewable natural resources as resources of open access. This approach originates in the wish of the Peruvian left of avoiding private property over natural resources and also to prevent foreign ownership. This was the approach of most of the Peruvian Constitutions of the twentieth century, that is those of 1933, 1979 and 1993.

Act 26821, The Sustainable Use of Natural Resources Act (LOASRN) says that the populations living in the surroundings of natural resources have a right to harvest those resources for their subsistence (article 17). This is called a preferential right. However this preferential right can be put to an end by the allocation of an exclusive right that is, a commercial license or a concession (article 18). This approach is reiterated in the General Fisheries Act and its regulations. This means in fact a diminished status for customary tenancy that still survives in good condition in subsistence economies.

However, at the international level there is an emerging trend in support of the recognition of diverse customary and legal tenancy arrangements over the landscape. The advancement in the recognition and content of indigenous peoples' rights has brought to light the existence of diverse customary arrangements. There are even some cases of long lasting common resources that extend even over a millennium.

The legislation developed since 1990s aims to promote sustainability. For that reason it contains a number of general statements regarding the good management of aquatic resources, however there are no concrete mechanisms in place to ensure that these goals are achieved or at least observed.

There are some myths and invisibilities in the discourse of the legislation regarding Amazonian development and natural resources management (Soria 2002). One of those invisibilities is that of the subsistence fisheries. Subsistence fisheries play an important role in providing the protein intake for Amazonian

indigenous peoples however there are no statistics about its size, its relevance for local economies and markets, and its management and sustainability. The legislation grants subsistence fishermen with free and direct access to the resource¹¹. Our case study shows that not one national governmental institution is studying or monitoring subsistence fisheries. This is an important finding that shows that the national level of government has abdicated to regulate subsistence fisheries maybe considering that this does not provide income for the government. However, as we have seen in the description of subsistence fisheries in the Pichis River, the use of Barbasco and dynamite is so widespread that the local population has developed some rules to ban these techniques or authorize them but with a previous request. Here is an area of important interplay between the local needs and solutions and those of the positive legislation. The unregulated continuance of subsistence fisheries in the Pichis River can harm the habitat of aquatic resources. Studies carried out by IBC show that the use of Barbasco requires at least 3 months to recover half of the population and 6 months to a healthy and populated environment (Castro et al 2007).

There are also some opportunities for a sound management of subsistence fisheries through the current process of decentralization, the allocation of new economic resources for regional and local governments and the implementation of the National System for Environmental Management Act [Ley del Sistema Nacional de Gestion Ambiental]. Decentralization implies the transferal of competences from the central government to the regional government. This has already occurred in the region of Pasco, thus the Regional Government of Pasco is fully competent to help develop legislation and regulations at the regional level in order to attain some management of the multiple types of fisheries.

Regional and local governments are receiving additional resources mainly from the revenues generated by a sharing of a 50% of the income tax received by the national government. Also the introduction of 'participatory budgets' promotes that the local population gets involved in the prioritization of local government spending. For instance, ANAP and IBC have prepared a proposal to finance Fisheries Vigilance Committees in the Pichis River in order to protect and manage subsistence fisheries.

A third influx is related to the implementation of the National System for Environmental Management Act [Ley del Sistema Nacional de Gestion Ambiental]. This is a framework law that aims to bridge gaps amongst various levels of government in order to improve environmental management, assess the use of environmental management tools and techniques and can also allow through the set up of a Regional Environmental Commission (CAR in its Spanish acronym) or a Municipal Environmental Commission (CAM in its Spanish acronym) (both are spaces for dialogue and agreement) in the development of environmental policies and legislation at the regional, provincial and local level.

¹¹ Article 6 of the 'Regulations for zoning fisheries in the Amazon' says that subsistence fisheries have free access to natural resources [La pesca de subsistencia tiene acceso libre a los recursos].

The impact of institutional weakness and the absence of the State

Weak institutional presence is another of the factors affecting the implementation of the legislation. Lack of economic, professional and operative means affect the possibilities of enforcing the legislation. There is no budget for covering operational costs of monitoring the fisheries. There is a regional director of fisheries in Cerro de Pasco while there is only one representative in Oxapampa for almost 3 million hectares. There are no boats, engines or other means for transport of national or regional authorities.

Ideology also influences policy practice. Subsistence fisheries are perceived as not generating revenues for the State. It is seen as a remnant of pre-capitalist activities that are hindering development. The government expects to replace the pre-capitalist mode of production with modern commercial production. As if there was no need to maintain areas solely assigned to subsistence use. As if these subsistence fisheries have no right to subsist anymore.

There is no institutional arrangement at the national level overseeing the problems of the subsistence fisheries. All responsibilities with regards to these fisheries have been transferred to the regional governments.

No sanctions or administrative procedures are applied in the Pichis River. Thus the authority has abdicated to oversee the local level.

Relationships Between The Legal And Customary Legal Systems.

We carried out workshops with different groups of the population in the four sites. We aimed to map fishing areas and frequency of use. This map (see figure 1) showed us frequency of fishing over the landscape. This map made evident the fact that although the river remains an open access area, mainly because it is difficult to exclude others areas such as those gorges of high interest for fishing that are located in an individual parcel of land are managed as private property, as the ban or permit requirement shows. Moreover the gorges inside communal areas were used communally; however these communal gorges in the area were of low importance for fisheries.

In our search for understanding local tenure arrangements and their relationship with fisheries, we found the governance conceptual framework as a very useful tool to bridge differences between the customary and legal framework in order to contribute to sustainable resource use. Thus, despite the fact that these customary rules regarding bans and permits are not a full system contributing to sustainability, these can be used as a base from which we can develop a proposal for a system of control and vigilance of fisheries at the local level. This proposal could later be developed into a proposal to manage subsistence fisheries in the Pichis River and eventually regulate the interaction of the area with commercial fisheries.

The positive legal system and the customary legal system exist both in relation with each other. They are not adjacent spaces but overlap between each other through some interconnection, interpenetration, an intersection of legal orders. Thus interlegality is a useful concept in the aim of observing the connections between norms and their symbolic expression, in different plains that go from local to national to international. This interconnectedness becomes apparent when we see that the restriction to use Barbasco on a gorge is result of a need to solve conflict among neighbors (meaning to avoid that cattle drink Barbasco) but also a recognition that the land where the gorge is located is hold in private property.

The importance of these rules is that at the local level they are contributing to reduce conflict in the access to fisheries among users of different origin, ethnicity and religion. This is a major finding in order to help design rules that are rooted in solving practical problems. The importance of these rules is that they can help develop a user based monitoring system to control the use of Barbasco and dynamite for a start but can later lead to other legislation developments through dialogue and agreement in institutional spaces such as the CAR and CAM. In fact the Ashaninka federation ANAP and IBC have already presented a proposal to the regional government to fund the operation of a system of local vigilance committees.

At a second stage we see the need for articulated and diverse policy response in order to address the differences between main rivers, tributaries, and upper and lower sections of the basins, as well as differences in the relationships of diverse social groups with the market, with other social segments and with the resources. This needs to be researched and understood in order to contribute to the sustainable management of fisheries in the Pichis River through the development of fisheries legislation at the regional level. Thus these types of normative developments and the interaction of customary and positive legal systems can help build legitimacy for environmentally sound fisheries management and for the role of the regional government on these matters.

In the Pichis River the introduction of regulations relating to the use of fishing techniques is mainly an answer to environmental degradation and to the need to solve conflict among multiple resources users. These initial customary arrangements around bans and permits are favored by the trends fostered by the national government around decentralization and transferal of competences over fisheries from the national government to the regional government, and the allocation of new funds for regional and local government's investment in development. At the same time the process of development of the environmental authority has been promoting the creation of spaces for dialogue and agreement between multiple resource users at the various government levels, as in the case of the Pichis River. This search to develop and environmental authority has favored the development of general legislation in favor or caring for basin wide approaches, sustainability and environmental management, but also has favored

the development of legislation such as the LSNGA that support the creation of spaces for dialogue and agreement at the national, regional and local level. In this context the conditions seem to favor the emergence of environmental governance at the local level.

Thus the decentralization process can, if adequately managed, lead to strengthen governance emerging from the grassroots through the recognition and institutionalization of local arrangements but also the developments of regional legislation and authority. In the current context in the Peruvian Amazon decentralization is an opportunity to strengthen local institutions for managing common pool resources.

In this context the ProPachitea Program of the Instituto del Bien Comun devised some strategies and has also adapted to the challenge of promoting the management of aquatic resources in the Pachitea basin. We initially foresaw the need for a basin wide committee; however one of the results of the return to democracy and the commencement of the decentralization process is the creation of multiple committees who usually involve more or less the same committed people and institutions. These committed individuals try to involve other local government officials but there is little understanding of environmental issues by the Mayor and other municipal officers in the most cases and therefore the matter is delegated to officials with very little power. That is the case in Oxapampa of the Board for Dialogue in the Struggle Against Poverty, the Committee Pro Oxapampa-Ashaninka-Yanesha Biosphere Reserve, the management committee of the Yanachaga-Chemillen National Park, the Board for Dialogue and Agreement in the Forestry Sector, among others. However there still remain some important institutional developments that need to be accompanied by civil society. As Putnam (1995) explained, there is an important role to be played by the thread of institutions from civil society in the building of development. The notion of social capital is also an important contribution to the aim of governance, as it evidences the importance of social relationships as vehicles for development, democracy and governance.

The Regional Government of Pasco was won by the New Left Movement. This new administration is mainly composed of teachers from the regional branch of the national teachers' organization SUTEP. This administration expressed its interest in auditing the NGOs. However the regional manager was changed and a more conciliatory approach was proposed. IBC and the NGOs approached the regional government to propose the need for dialogue and agreement in order to build a common shared view. In this context NGOs reviewed the 2020 Development Plan for the Pasco Region and proposed the incorporation of more environmentally sound proposals. Thus we have gone from a confrontational approach to building consensus. Particularly in regard to fisheries we have proposed the adoption of regional legislation and the allocation of economic resources in order to strengthen local control over fishing areas in the Pichis. We

are also proposing to the regional government the official adoption of educational material produced by NGOs in support of environmental management.

Decentralization and Environmental Management.

At the province level we have been working with the Provincial Municipality of Oxapampa and the Provincial Municipality of Puerto Inca. IBC and its partner organizations have been promoting the implementation of the LSNGA. For that purpose, in Oxapampa we have been requesting the Provincial Municipality of Oxapampa and the Provincial Municipality of Puerto Inca¹² to convene meetings of the Municipal Environmental Commission. In some cases the new administrations that took office in 2007 saw the Municipal Environmental Commission and the process of implementation of the LSNGA as an agenda of the previous administration and were, therefore, not interested in continuing these processes. Our efforts have focused in making evident to the new administration the opportunities of collaboration with our organization and other civil society organizations to provide them with initiatives and technical support to develop new environmental projects to be financed through public funds.

At the level of district municipalities we have been working with the District Municipality of Puerto Bermudez to strengthen the formulation of sound environmental policies, initially through the implementation of the LSNGA. For that purpose we have helped establish the Municipal Environmental Commission¹³ in Puerto Bermudez.

IBC first signed a framework agreement in support of the management of natural resources in the Pichis sub-basin. Other more specific agreements have been signed as for instance in the case of the creation and administration of municipal nursery to execute reforestation programs with the local communities. Some plants are to be donated and others are to be sold according to whether they serve common environmental purposes or individual commercial interests. IBC has helped the District Municipality of Puerto Bermudez elaborate proposals to set up: a. Fisheries Vigilance Committees; b. riparian reforestation programs; and c. a riparian defense and ethnobotanic path as part of the urban landscape of Puerto Bermudez. IBC has also helped prepare legislation proposals passed by the Municipality of Puerto Bermudez in order to help ordain fisheries management in the sub-basin. All these proposals were elaborated in a workgroup formed by representatives of the Institute of Natural Resources INRENA, the Ministry of Health MINSA, the Ministry of Agriculture MINAG, the Ashaninka federation ANAP, the local cattle rancher association and IBC.

Decentralization and Governance

¹² The Municipal Environmental Commission of Puerto Inca was set up with the support of PRODAPP.

¹³ The Municipal Environmental Commission (CAM) main purpose is to serve as a space for dialogue and assessment of the implementation of environmental management mechanisms, but will also serve to a larger discussion around environmental policies and eventually in the development of legislation at the regional, provincial and local level giving to these governments.

The size of the population taking part in participatory spaces is certainly small compared to the rest of society. Additionally municipal government only started to be elected in 1960s. This practice was abandoned during the 1970s and only reinstated in the 1980s. While citizen participation on environmental matters only was required by Peru's Environmental Code in 1990 and started to be implemented by sectoral authorities as early as 1993 but is a process that has not yet been finished in all sectors.¹⁴

At the local government level a few other changes such as the participatory budget promote citizen participation in the allocation of funds of the municipality's budget. In the case of Puerto Bermudez the fact that the mechanism was been applied for the first time contributed to the disorientation and innocent analysis of the priorities in the allocation of funds of the participants of the workshop. For instance the Mayor pushed the allocation of 3 million dollars to buy heavy machinery to build a road that is going to be profited by loggers.

Civil society participation has been affected by the low level of education and training in good governance of the local participants from the voter to the Mayor and its council. This affects particularly indigenous peoples and other rural peoples, especially those with a low income. On the other hand those in power use their means to ensure that participation does not affect their access to power. For instance, in Puerto Bermudez the Mayor used the facilitators of the workshops to ensure that no criteria were discussed to decide how to prioritize the proposals. That is the administration was more concerned with prioritizing some projects as, the buy of heavy machinery, than to ensure that the public be able to compare, analyze and decide. Thus the administration profited of the inexperience of the participants and used their participation to legitimize their pro-loggers agenda of opening a road from Puerto Bermudez to Pichanaki, across the headwaters of the San Matias San Carlos Protection Forests.

On the other hand it is necessary to recognize that this is also the result of the multiple interests at stake in the region. Thus, the Municipality of Puerto Bermudez has representatives of loggers, conservationists, the teachers union and indigenous organizations. These forces forge alliances between council members and the Mayor. This has been the case in which the Mayor and the pro-loggers council members are the predominant force. However, there is one council member open to push forward the environmental agenda. He has been a key figure to help set up the Municipal Environmental Commission. IBC early understood the need to identify the power forces inside the municipality, in order to help build an alliance with politicians and public officers interested in environmental management.

¹⁴ The industry sector is particularly under regulated and under supervised. For instance, only 8 of the 43 sub-sectors of the industry sector have declared their environmental situation to the authority, the remaining 35 have not been required to adopt any environmental measures.

The local actors received decentralization with enthusiasm because it offers opportunities for citizen participation and for developing environmental management proposals, two dire needs of the local population. It also opens mechanisms to supervise natural resources as in the case of the Ordinance establishing Fisheries Vigilance Committees in the District of Puerto Bermudez. However, these opportunities have to be disputed with other actors also participating of these spaces such as the cattle ranchers or the loggers which have traditionally held access to power in the Pichis sub basin.

Thus the consolidation of decentralization heavily depends in the support of civil society organizations and the Church. Puerto Bermudez is immersed in a subsistence economy with strong ties to patrons that sustain their profit in the social relations that they build with their clients/suppliers. This explains the need to educate and train the population in the practice of democratic government, transparency and governance.

Conservation and Governance

IBC aims to generate public policies in support of conservation particularly regarding (a) fisheries and (b) oil and infrastructure, which threatens indigenous peoples' lands. In the first case IBC set up an alliance with the Ashaninka indigenous federation ANAP, the Municipality of Puerto Bermudez and INRENA in order to help develop local legislation in support of fisheries management. In the second case we have requested the Peruvian Ombudsman to investigate the risk posed to the Cacataibo isolated indigenous peoples by oil activities in oil block 107. We also requested with the Cacataibo Federation FENACOCA and the Center for International Environmental Law CIEL precautionary measures to the Inter American Human Rights Commission IAHRC in support of the Cacataibo isolated indigenous peoples of oil block 107 whose life and integrity will be affected by seismic testing in their territory. IBC coordinated with Survival International an international campaign on support to the Cacataibo isolated indigenous peoples. IBC received the support of the Washington based Center for International Environmental Law for the Cacataibo case and from the World Resources Institute regarding incidence on environmental and social issues in the hydrocarbon sector.

IBC has contributed to the strengthening of public institutions and policies in the following areas:

- a. helping set up the Municipal Environmental Commission;
- b. participating in public spaces as the Board for the Struggle Against Poverty, the Board for Dialogue in the Forestry Sector; and
- c. co-organizing workshops with the regional and municipal level authorities.

Once we understood the existence of local customary rules and their relevance for environmental management in the area, we were more able to understand the proposals of the local people to achieve control over natural resources management. These proposals emerge from the workshops held in the study

area during 2005-2007, but are also based on the findings of the studies of the legal framework and social context of the subsistence fisheries. The proposal is:

1. to produce a reform on the way subsistence fisheries are managed by the State;
2. to strengthen decentralization that can lead to regional legislation in support of fisheries and environmental management; and
3. to start in the short term with the set up of local vigilance committees.

A reform at the national and constitutional level to protect aquatic resources, and ensure the coexistence of subsistence and commercial fisheries would require an enormous effort of incidence over the national government, when indeed national government officials such as the Ministry of Production or the President of the Republic of Peru see subsistence economies as outdated and requiring a major restructuring to exclusively promote commercial fisheries (Garcia 2007). At the same time, the responsibility of managing fisheries has been transferred to regional governments, thus it is more efficient to influence regional governments. In the case of Ucayali the importance of fisheries as a daily supply meant that the regional director of fisheries was both receiving pressure and interested in managing fisheries. In the case of Pasco the headquarters of the regional government are located at 4200 m.o.s.l. outside the Amazon basin, therefore Amazonian fisheries are not necessarily a priority of the regional government. However, the existence of a sub-office in Oxapampa can help build that link.

Decentralization is a good opportunity to produce a more tolerant and diverse policy over natural resources, in this case fisheries. IBC will continue to provide technical help to the regional, provincial and local government in the Pichis sub-basin for a sound management of aquatic resources including subsistence fisheries. The construction of dialogue and agreement through the implementation of the LSNGA will provide space for agreement around the development of legislation and the assessment of its application. For that IBC and partner organizations will participate of the Regional Environmental Commission in Cerro de Pasco, the Provincial Environmental Commission in Oxapampa and the Municipal Environmental Commission in Puerto Bermudez.

The set up and maintenance of Fisheries Vigilance Committees is a crucial tool in the search to sustainably harvest the local fisheries. It is very important that both the regional government and the municipal government support the operation of these Fisheries Vigilance Committees composed of local population. The idea would be to help enforce the rules already in place in access to gorges (prohibitions and permits) and help the river and the fish recover from excessive pressure in some of the tributaries and protect the well conserved Apurucayali River. This proposal emerges from the local Ashaninka people in order to help to sustainably manage their territory, where some of the remote communities have kept tracks of forest along the river banks in good condition. An opportunity to help carry out this process is to rely in social structures of the indigenous that

prefer to fish among family, and also on a recognition of local knowledge and scientific knowledge.

Conclusion

Our research shows local efforts to build governance around fisheries management. This is the base from which we aim to contribute to feed public policies in regards to fisheries. IBC's research and policy development effort aims to contribute to a more sustainable fisheries management in the Amazon region.

The GAF help us understand the interactions occurring among diverse resource users with different interests in the context of fisheries in the Pichis River. The process of interaction occurs around fisheries. The customary land zoning of the river and surrounding areas has in the gorges with most relevance for fishing their nodal points where interactions and agreements are enforced and renewed. The aim of this system is to help the river recover its natural condition and continue producing aquatic resources. When we look at the 5 tributaries of the Pichis River it is possible to observe a diversified strategy aiming to achieve some control over aquatic resources, protecting them from commercial fishermen and ensuring subsistence fisheries. And all of these agreements are decisions taken collectively by the local communities in regards to the river where they live.

We see GAF as a tool that can be scaled up or down to involve different interactions among diverse level actors. In this case we chose to look at the local level but also being aware of the interactions occurring at a wider context. I see one challenge as applying this GAF to various levels interactions (national, regional, local and NGO), in this same case, and then reinterpreting all them together. Such an exercise can provide more detail on understanding the complexity of interactions that occur at various levels and in multiple spaces. We chose to look at the Pichis River but scaling to the Amazon basin still remains as a challenge. We plan to expand our research to Ucayali and Amazon rivers, so that we can view a more complex picture that can provide us a glimpse of what is actually occurring in the Peruvian section of the Amazon basin in regards to customary management of fishery resources.

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