

**Consolidation of Local Democracy In River Preservation And Fisheries  
Management on The Lower São Francisco River, Northeast Brazil**

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**Abstract**

This paper focuses on the effects of institutional choices and recognition on decentralization of river preservation and fisheries management on the Lower São Francisco River, Northeast Brazil, especially since the 1990s. By emphasizing issues of inequities and marginalization that stem from identity politics and institutional choices, the objective is to understand how the institutionalization of participatory watershed and fisheries/aquaculture management programs increase or decrease the possibility of democratic action and democratic control at the local level. Grounded in a detailed ethnographic study in two municipalities, this paper explores how the decentralization of the Federal Government's Revitalization Plan in the São Francisco River basin changes access to democratic control over fishing resources. It finds that the decentralization of the Revitalization Plan in some cases expands and in others undercuts the possibility of democratic action, especially for historically marginalized local communities whose livelihoods have traditionally depended on the river habitat, water quality and flow regime. This paper also examines the extent to which elected municipal versus traditional fishing authorities represent the interests and needs of fishing communities with regard to fisheries management. It first traces the historical context of the relationship between fishing communities and state in the region, and then presents detailed findings drawn from two municipalities alongside the São Francisco River. It finds that the process of institutionalizing participatory watershed and fisheries management in Brazil has helped in some circumstances to undermine and in others to strengthen both elected municipal and fishing communities along the lower São Francisco River.

## **Introduction**

The question of fisheries and water resources governance is central to discussions of democratic decentralization (Agrawal and Gupta 2005; Gutberlet et al., 2004). The debate on democratic decentralization of natural resources governance is divided between scholars that assert the role of the new institutions in undermining representation in democratic local government (Ribot and Larson 2005), while other scholars argue the concept of complete democratic decentralization and its ability to represent the interests of groups historically marginal to natural resources management, especially in Latin America (Larson 2005). This paper highlights the effects of institutional choices and recognition by decentralization of river preservation on artisanal fisheries management on the Lower São Francisco River, Northeast Brazil, especially since the 1990s. This paper aims to understand how the arena of public domain—the public political space where citizens feel able and entitled to influence their authorities (Ribot, 2004)—has changed after the Bureau of National Integration, the National Bureau of Aquaculture and Fisheries, and the National Bureau of Environment chose to work through municipal government, helping to implement, for example, projects that intersect and intercept water resources and fisheries management, such as the \$5 billion Revitalization Plan for the São Francisco River Basin (MIN, 2000). The Revitalization Plan includes, as high priority policies, the implement of tourism and aquaculture developments to minimize the economic effect of fisheries decline at the municipal level on the lower São Francisco River, Northeast Brazil. Little has been studied on the public domain intersection between inland fisheries and water resources policies, where access to power and resources has historically been a problem for artisanal fishers who are frequently marginalized or under-represented stakeholders. In understanding public domain changes in the intersection between inland fisheries and river management on the São Francisco River, this paper will assess some of the effects of politics of choice and recognition in the consolidation of local democracy in this region. This approach is unique in the literature and complements other studies of the impacts of democratic decentralization and green governance of river preservation, water resources and fisheries.

## **Key Questions, Hypothesis and Methods**

How have the chosen institutions responsible for the planning and further implementation of the River Revitalization Plan been substantively democratic? Are they competing with local government for power and legitimacy? Are these institutions affecting the consolidation of local democracy in inland fisheries preservation? Are they creating competing forms of recognition and belonging among elected municipal authorities and artisanal fisheries guilds, with impacts on river habitat preservation?

When fisheries, aquaculture and water management intersect, how are the fragmented forms of belonging affecting the representation of the artisanal fishermen in the public domain of watershed management?

However, this research does not find a simple answer for the following hypotheses:

- that government and international institutions are fragmenting the local arena into multiple forms of belonging with negative outcomes for the preservation of inland fisheries habitat;
- they are enclosing the public domain available to local municipal authorities and artisanal fishermen on the São Francisco River

Instead, a more complex system of State-society synergy exists (Evans, 1996) wherein municipalities, civil society organizations and private sector are engaged in managing local resources. The background research for this study is based upon the review of multi-sited ethnography collected in 2003 and 2005. In 2003, participant observation during two Global Environmental Fund (GEF) meetings aimed at understanding the institutional choices in watershed decentralization, and priorities of the watershed committee of the São Francisco River (CBHSF); then, in 2003, participant observation of another meeting during the national Seminal of Artisanal Fisheries aimed at understanding fishing and regional/local environmental governance. In October 2005, participant observation at the meeting supported by Food and Agriculture Organization (FAO), and Brazilian agriculture research (EMBRAPA) aimed at understanding how aquaculture would resolve the fish problem along the São Francisco River. Supplementary phone interviews with some of the local authorities, and leaders were made in between December 2005 and March 2006.

This paper is organized in six sections including this introduction. The next section addresses the background changes in fisheries and water resources governance in Brazil. The third section presents theoretical aspects regarding decentralization and institutional choice in Brazil. The fourth section presents the case studies. This is followed by a discussion and analysis of representation, citizenship and public domain inferred by the findings, then a brief conclusion.

### **Theoretical considerations in Fisheries and Water Resources context in Brazil**

An analysis of the needs and demands of a traditional population movement and an understanding of the historical relationship between these populations and the state help to clarify the discussion of decentralization and institutional choice in inland fisheries and water resources in Brazil. Since mid-1980s, these movements have made successful campaigns for the transformation of its democracies, by expanding concepts of citizenship rights, environmental justice and multicultural states (Andrade, 2006; Cardoso, 2001; Diegues, 2002; Marques, 1992 and 2001).

- Democratization of local, regional and national fishing guilds in Brazil, and the creation of traditional fishing community identity, since post-military regime 1985

For example, in 1986, a constituent movement was organized to put before the country's Constituent Congress the views, interests, and propositions of the African and Indian-descent traditional fishing communities. Between 1919 and 1923 the Brazilian government created three levels of organizations that represented artisanal fishermen at the local, state and national level in regulating production, taxation and defining fishing policies. However, the leaders of those organizations were non-fishermen, they were individuals intimately linked to the Navy and local elite political interests, using the organizations as electoral pools for their political candidates and interests, in a regime of authoritarian clientelism and patronage. Those non-democratic representations consisted, respectively of fishermen's colonies, federations and confederation, in municipal, state and national levels. The constituent movement sought to struggle against the centennial obligatory affiliation of fishers to the local guilds. Manecshy (2001) and Cardoso (2001) observed that the process of democratization of local guilds was fragmented: there was no election of delegates in some states, and opposition from other fisherfolk federations

such as São Paulo and Pará. Even with the artisanal fisherfolk movement facing those hardships, the National Fisherfolk's Constituent Movement was able to expand the Article Eight of the Federal Constitution approved in 1988 to include the artisanal fishing guilds as democratic bodies. The fisherfolk guilds won free association, non-state interference, autonomy, and union unity— a legal benchmark of the end of its government guardianship, and first democratic elected representation.

After the Brazilian Constitution was approved in 1988, the National Movement of Fisherfolk (MONAPE) continued the work initiated by the National Fisherfolk Commission. Since the 1990s in particular, MONAPE's agenda included the São Francisco River to discuss the defense of its aquatic environment to sustain the threatened livelihood of a large traditional population of artisanal fishermen.

- Artisanal fishers as traditional population, identity and belonging

A political economy perspective on artisanal fishing classifies these types of fisherfolk from self-employed single operators which can be considered as informal micro-enterprises to wage-paid crew-members employed as part of more formal businesses (Purvis 2001). But inland artisanal fishing activities also concern the thousands of people who engage in fishing on a seasonal or even temporary or opportunistic basis. In all these cases the contribution of fishing to the household livelihood is substantial or often essential. According to Bené and Neiland (2006), in floodplain areas inland fishing fits within a flexible matrix of activities which constitute the basis of a diversified livelihood strategy. Scholars argue that when other local economic activities are collapsing, fisheries will usually provide a safety net for the displaced rural population (Andrade, 2006; Panayotou, 1982; FAO, 1994 and 2000). Widely distributed and easily accessible to marginal and/or isolated communities inland fisheries provide an alternative source of income and food to marginal communities when the other livelihood support activities are limited or unproductive.

An anthropological discussion of local identity and belonging argues that “local communities do not necessarily exist in already pre-given form (...) Environments may be socially constructed in specific controversies, but so too are the communities that are formed around the specific issue; communities often construct specific local identities as

part of the campaign against an external development understood as a threat” (Dalby and Mackensie, 1997:101).

In Brazil, artisanal traditional fisherfolk are fishermen and fisherwomen who are historically engaged in subsistence and/or small-scale commercial fisheries, and who produce their own fishing tools (boats, fish cages, nets, bait, etc.) (Andrade, 2004a and 2006; Diegues, 2003; Marques 1992 and 2001; Silva, 1990). In order to construct artisanal fishermen identity along the São Francisco River, riverine and floodplain fishing communities have articulated with larger social group in search of cooperation to solve their social, political and environmental conflicts (Andrade 2006). Fisherfolk’s conflictive relationships evolved from local subordination towards regional and national subordination. Both local and national subordination have effectively marginalized fisherfolk from the process of participation in decision-making over their traditional fishing territory (floodplains, marshlands and riverbanks) and environment.

- Fishing citizenship with the Pastoral Council of Fisherfolk

The Pastoral Council of Fisherfolk (CPP) is tied to the National Conference of the Bishop of Brazil (CNBB) through its “social pastoral plan.” CPP centered around the work of a German Franciscan priest, Alfredo Schnuetgen, who during his walks along the Olinda beaches identified marginalized fishing communities whose lives were characterized by isolation, and subordination to merchants along the coast and rivers of Pernambuco state. The first meetings with the Olinda fisherfolk yielded “Christian Fisherfolk,” which began to publish an informative bulletin, *O Leme* (The Rudder). Friar Alfredo’s discussions with the fishing community stimulated interest for an effective organization of fisherfolk separate from the non-democratic fishing guild. Literacy groups were organized for the fisherfolk and their families. The movement soon outgrew its local character, spreading rapidly to other regions of Pernambuco, Alagoas state and beyond. In 1974, Christian Fisherfolk was recognized by the Northeast regional CNBB (National Conference of Brazilian Bishops) and, in 1976, it was declared a “pastoral national interest,” and named the Pastoral Council of Fisherfolk (CPP), with

headquarters in Recife. The objective of the CPP was to increase democratic forces among those subaltern working classes for social justice:

The strengthening of CPP and the democratization of fishing guilds have been intertwined. Since its beginning, the CPP has played an important role in supporting the fisherfolk, and has effectively contributed to several significant campaigns for social and environmental justice, and political change. Thanks to the CPP, today all fishing guilds around the country are headed by active fisherfolk (women and men) and have an environmental component. In the 1970's, fisherfolk guilds were still too weak politically to protect fishing communities' interests. The first public conflict over river contamination occurred between large sugar mills /industrial lobbies, and the affected and marginalized population of fisherfolk from the Igarassu and the Goiana rivers in Pernambuco. The CPP was the first entity that attempted to link critically the energy crisis in 1974 and the Brazilian government's policy response of PROALCOOL with the social and environmental injustice towards fisherfolk as a marginalized working class along the coastal rivers of the Northeast. The CPP mobilized the fisherfolk movement and leadership while criticizing municipal cooperation with the expansion and mechanization of sugarcane distilleries, by showing its negative social effects on "increasing unemployment and river pollution, with serious health problems and diminishing quality of life for the fisherfolk population."

Fishermen received support from environmental and social justice NGOs, ethnoscientists, and finally environmental and developmental government institutions. The network strategies to overcome local conflicts over fishing territories and river ecosystem created new forms of identity on multiple scales of representation and social mobilization (local, state, national, regional, and watershed-wide). Those representations reiterated local fisherfolk leaders' claims for access to: social benefits, labor recognition, acknowledgment of their fishing territories, the creation of environmentally protected swamps, and campaigns to ensure the ecology of the São Francisco River, lagoons and estuary as their own cultural survival.

- Inland artisanal fisheries governance subordinated to environmental regulation: fisheries versus aquaculture and water resources

Despite this central role played by inland fisheries in sustaining the livelihoods of thousands of people in Brazil's rural areas, there is at the same time a growing recognition that the present governance systems of inland fisheries are still in some places centralized, weak and ineffective, and an increasing number of studies show unprecedented threats that inland fisheries and the people who use them are facing (Andrade, 2006; Diegues, 2002; Samudra, 2004). The majority of these threats originate outside the fisheries sector. The Fishing Office of the Food and Agriculture Organization (FAO) has proposed a framework of policies and regulations in pursuit of sustainable and inclusive fisheries governance. By sustainable, FAO means the adoption of long-term policy for conservation of fisheries resources for the future generations, while at the same time remaining inclusive by taking into account the interests of fishers, especially those engaged in subsistence, small-scale and artisanal fisheries.

However, as a techno-economic alternative to fish decline in many rivers and lagoons and increasing impoverishment, FAO has invested in small scale aquaculture projects and businesses with the goal of addressing poverty, hunger and fish scarcity problems facing small-scale fishermen in Brazil. The Brazilian government, with the support of FAO, has invested in aquaculture for several years. Enforcing the practice of fish repopulation since 1971 (Sudepe, 1971 and 1977) as the most important measure in mitigating dam construction in impacted rivers, the government has invested in aquaculture research and development (R&D) and government-owned fish hatcheries, with help from international organizations and investors, such as FAO, CGIAR, WorldFish and World Bank. During the mid 1990s, aquaculture became institutionalized under neo-liberal prerogatives, attracting international and Brazilian private investors, this time to form large aquaculture businesses for fish domestic production and export. In 1994 the sector was responsible for 4.3% of total fish production in the country; in 2002 the contribution of aquaculture rose to 26.4% of the total (FAO, 2005).



In 2003, Brazilian President Lula da Silva created the Special Bureau for Aquaculture and Fisheries (Secretaria Especial de Aquicultura e Pesca – SEAP), by Law No.10.683 for the management and development of fisheries and aquaculture in Brazil. SEAP assists the President in the drafting of policies and guidelines, promotes actions aiming at the construction of infrastructure for the development of fisheries, aquaculture and fish products trade, and implements programs for the rational development of aquaculture, in cooperation with the Federal District, States and Municipal Authorities. SEAP is also responsible for the upkeep of the General Fisheries Register (*Registro Geral da Pesca* – RGP), the granting of licenses, permits and authorizations for fisheries and aquaculture. SEAP also transfers 50% of tax income and licence fees to the Brazilian Institute for the Environment (Instituto Brasileiro do Meio Ambiente – IBAMA), attached to the Ministry of Environment and Natural Resources (Ministério do Meio Ambiente e dos Recursos Naturais Renováveis – MMA).

Within the activity of SEAP, a central role is played by the National Council for Aquaculture and Fisheries (Conselho Nacional de Aquicultura e Pesca – CONAPE), which is vested with advisory and organizational functions, mainly concerning the matters listed above. Another focal institution for the management of fisheries is the aforementioned National Environmental Agency IBAMA, which replaced the Superintendancy for Fisheries – Superintendência da Pesca – SUDEPE, in 1989. In that year, four environmental authorities (Secretariat for the Environment - Secretaria do Meio Ambiente – SEMA; Superintendancy for Rubber- Superintendência da Borracha – SUDHEVEA; Superintendancy for Fisheries - Superintendência da Pesca – SUDEPE; and the Brazilian Institute for Forestry Development - IBDF) were merged into the Brazilian Institute for the Environment (Instituto Brasileiro do Meio Ambiente – IBAMA). Its responsibilities mainly concern environmental issues, such as natural resources conservation (including aquatic resources), environmental licenses and water quality control.

According to Brazilian fishing legislation, to become officially part of the fisheries sector and receive social benefits from fishing activity, women and men have to have at least 3 years of official documents that prove they actively work in this field. The

unemployment salary helps professional fisherfolk survive with a minimum wage each month during *defeso*, those months of prohibited fishing activity, when large migratory fish are reproducing (*piracema*).

From a legislative point of view, the federal framework of fisheries and aquaculture is quite fragmented. The Fisheries Code – Decree-Law Promoting and Protecting Fishing Activity (Código de Pesca – Decreto-Lei sobre a Proteção e Estímulos à Pesca) (1967, as amended), which is the main piece of legislation regulating the matter, dedicates three articles to aquaculture development. Consequently, through the Working Group on the Revision of Aquaculture Legislation created in 2003, SEAP is currently fostering the promulgation of an Aquaculture Law (Código de Aquicultura), which would assign several rights to farmers and aquaculture cooperatives. In the context of regulation and increasing the importance of aquaculture cooperatives, fishing guilds are becoming increasingly invisible to the government reflecting the declining of inland and coastal fish production. As an example, the National Agency of Water Resources (ANA) simply ignores the conflict between fishing and other users, instead ANA includes water conflict between fish farming and other uses. Increasing women participation in fisheries activity and social benefits

- Women participation in fisheries

For more than 30 years female participation in fisheries in Brazil was only partially recognized by SUDEPE (Superintendence for Fisheries Development). Women from fishing communities were allowed to work only as shellfish or algae collectors. The legalization and regulation of women performing other fishery activities were only recently granted in the Constitution of 1988, when women received the same status and rights as men. This situation is slowly changing and in some states of the North and Northeast, women do small-scale fishing. There are also cases of widows who work alone in artisanal fishing boats. The role of women in fisheries has been increasingly highlighted since the early 1990's by Catholic churches, the Fisheries Pastoral (Conselho Pastoral da Pesca – CPP), the National Movement of Fishworkers (Movimento Nacional de Pescadores – Monape), and more recently by local NGOs. For example, the NGO Terramar, with the support of the International Collective in Support of Fishworkers and

the CPP, organize specific reunions and workshops to discuss the problems and the potential of women in fishing in Ceará and other northeastern states.

- The growing recognition of democratic water resources governance in Brazil

In 1997, Water Code 9433/97 created the new National Agency of Water Resources (ANA) to provide a more decentralized and democratic neo-liberal administration of water resources in Brazil. According to the new water code, ANA's mandate was to form nationwide watershed committees to implement water policies along national rivers, such committees being composed of a mix of stakeholders from private sector, civil society, NGOs, indigenous groups, and three levels of government representation (local, state and federal). The creation of the São Francisco River Watershed Committee –CBHSF- is part of the implementation of neo-liberal participatory and decentralized river and water resources management in Brazil (CBHSF, 2005; Andrade, 2002). Previously, water resources and river managerial decisions were centralized at the federal and state level bureaus, with little municipal and civil society participation and decision-making. Literature on water resources decentralization in Brazil argues that the transfer of power depends on the ability of the committees to invite municipalities and civil society to participate, give incentive and take decisions over water and river preservation management (Brannstrom et al., 2004; Lemos and Oliveira, 2004; Abers and Keck, 2004). Such activities also involve the creation of sub-basin committees, which promise to incorporate local needs and demands into resource management.

The CBHSF represents all water users (government, private and public sectors) interests and aims to create a policy making body that is truly democratic and inclusive in its decision making (CBHSF 2005). The participating representatives include business and user interests, like electricity companies and irrigation projects, as well as municipal, state, and federal leaders, and members of civil society. About 27% of the seats in the committee are designated for civil society, 40% to business and user interests and the remaining 33% of the seats have been designated for municipal, state and federal

representatives. Artisanal fishermen and indigenous groups have each one a seat in the watershed committee. To advise the São Francisco River Watershed Committee, a multimillion dollar study ran between 1998 and 2004, sponsored by the Global Environment Facility (GEF, 2004), ANA and the Brazilian National Council for Science and Research Fund<sup>1</sup>. The GEF study formulated priorities for the implementation of river and water resources policies, economic valuation of water, and mechanisms for participatory watershed management. The literature in water resources decentralization in Brazil focuses on the institutional networks and mechanisms that enable local participation in river governance (Lemos and Oliveria 2004, Brannstrom et al, 2004), and attributes the success stories of power shifts that accompany decentralization as being mainly a result of complex organizing practices. These ‘decentralization transfers’ occur under many different styles of intervention, including privatization, participatory or empowerment approaches, approaches that are NGO and civil society supported, social funds mechanisms, and community driven development (Ribot 2004; Pritchett and Woolcock 2004). Each approach empowers different kinds of local institutions or authorities, with potentially different democratic and distributional outcomes.

### **Democratic decentralization: Local level politics since the 1980s**

Following the democratization process outlined in Brazil’s 1988 constitution, elected local governments in municipalities received “triple autonomy” at the political, administrative and financial levels (Fox, 1994a). The same constitution launched a wave of significant bureaucratic and democratic decentralization, sometimes leading to an uneven pattern of political, financial and budgetary resources among municipalities, according to its history and economic activities.

According to Neves (2004), one important aspect of institutional innovation in democratic decentralization has been the creation of local community councils which have absorbed grassroots movements and backed social programs and environmental policies at the local level. This institutional innovation opens a greater possibility of State-Society synergy, in which state agencies and local communities work together to

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<sup>1</sup> This study provided a set of 40 “scientifically sound” studies using contributions from some 500 Brazilian scientists, with the objective of promoting an economic revitalization plan for the entire basin

produce a needed service or collective good (Evans, 1996). There are several modalities of local environmental management agencies, including municipal executive bodies and secretariats, local councils and committees, consortia and cooperative compacts between municipalities and various stakeholders. In all these cases, municipalities have to develop local environmental legislation and budget to enable them to create local protected areas and sustainable development practices. Unlike forestry zoning and management, local elected municipal government has little if any participation in coastal and inland fisheries policies and management in Brazil. The creation of environmental protected zones in large water bodies, such as the São Francisco River has been largely deliberated by federal and state environmental agencies, with little participation of local municipal authorities.

Another significant institutional innovation in decentralization is the Public Attorney, who protects the rights of society — represented as consumers — to have access to resources and public services, and in some instances environmental conservation. In the case of the São Francisco River, for example, each municipality hosts a Public Attorney (Ministério Público) who acts to defend the river against local environmental infractions, accordingly to municipal, state and federal norms. Those municipal Public Attorneys, articulated with state and federal instances, have power to prevent activities that will hurt the Water Law 9433 and other environmental laws that protect riverine forest, for example.

#### ○ Decentralization and Institutional Choice

According to scholars studying the effects of decentralization, it is necessary to differentiate decentralization, deconcentration and privatization in terms of democratic outcomes (Ribot 2004). Political or democratic decentralization occurs when powers and resources are transferred to authorities representative of and downwardly accountable to local populations. Democratic decentralization aims to increase popular participation in local decision making, thus it is an institutionalized form of the participatory approach. Deconcentration or administrative decentralization involves the transfer of power to local branches of the central state, such as prefects, administrators, or local technical line-ministry agents. These upwardly accountable bodies are local administrative extensions

of the central state. Deconcentration is therefore a “weak” form of decentralization because the downward accountability from which many benefits are expected are not as well established as in democratic or political forms of decentralization. Privatization is the transfer of powers to any non-state entity, including individuals, corporations, NGOs, etc. Although often carried out in the name of decentralization, privatization is not a form of decentralization. It operates on an exclusive logic, rather than on the inclusive public logic of decentralization and does not take into consideration downward accountability.

As a measurement of decentralization, accountability is usually understood (in principal-agent theory) as “the requirement for one party (the agent) to give an account of his action to another party (the principal)” (Power 1997, p.5). Accountability –and in particular accountability of the State (the ‘Executive’)- has recently attracted a great deal of attention, especially by the World Bank, which has developed a framework based on this concept to address issues of public accountability and corruption (World Bank 2000).

The literature addressing the effect of decentralization on water resources and fisheries management needs to address the role of politics of choice. To understand why decision makers choose certain institutional arrangements requires an understanding of both stated and unstated objectives (Ribot 2004), the understandings of causality informing decision makers’ choices, and their awareness of the effects of these choices (Ribot 2004). Although the discussion on democratization, poverty alleviation, development, service delivery and natural resource management examines stated objectives of laws (McAllister 2005) and projects (Donahue and Jonhston, 1998), these studies show that policy makers and project designers choose local institutions only partly on these stated aims. Fox (1994b) argues that democratic governance depends on the density of associational life in civil society and how those intermediate associations form autonomous organizations. In that sense, the effects of democratic decentralization on a full range of citizenship rights throughout the society involves studying how most people are actually represented and governed – before, during and after the historic turning point in democratic decentralization. This work highlights the importance of empowerment of autonomous organization in civil society in creating public domain for citizens to exercise their rights to pursue their goals autonomously.

In that sense the history of democratic decentralization of artisanal fisheries organizations as autonomous associations is an excellent example to understand how those groups are legitimated under decentralized policies of river preservation and aquaculture development. However, those representations and belongings have been changing in the past five years, as government and international institutions have been changing the landscape of the local politics over water and fisheries resources.

By emphasizing issues of inequities and marginalization that stem from identity politics and institutional choices, the next section will bring some evidence on how local belonging and representation of artisanal fishing guilds have been jeopardized and strengthened in some instances through institutional decentralization across state-society in water resources and fisheries policies.

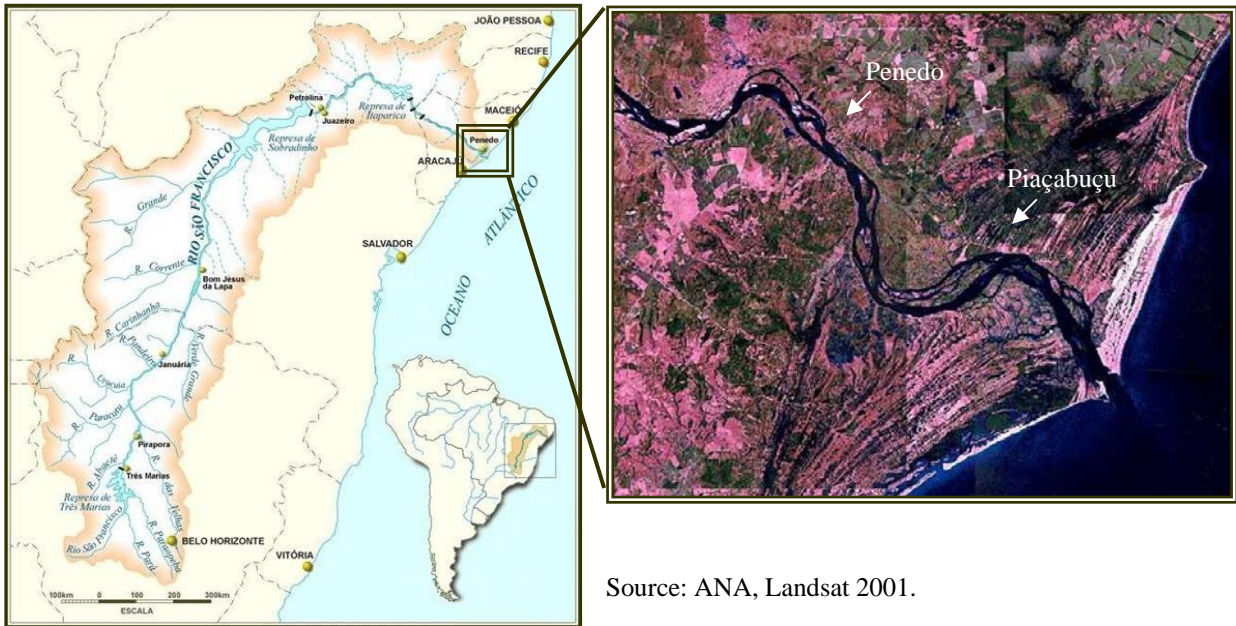
### **The São Francisco River: Penedo and Piaçabuçu municipalities**

The São Francisco River extends through six Brazilian states, draining a total area of 644,000 km<sup>2</sup>. It has a current approximate population of 18 million people, living in 504 municipalities, including the capital of Brazil, Brasilia DF. Urban growth, river regulation and increasing agribusiness have changed the water quality and quantity along the São Francisco River, affecting the lives of a significant large population of rural traditional communities whose livelihood depends directly on the river's fish and natural flow regime.

In Penedo, fishing is a very important economic activity, contributing to employment of 1000 families officially registered at the fishing guild Z-12, and an estimate of more than 5000 families fishing without license. In Piaçabuçu, approximately 2000 families are officially registered at the fishing guild Z-19, but more than 3000 families are still fishing without a license in the river. Since 2001, CPP and both Z-12 and Z-19 fishing guilds organized all the women that fish and commercialize fishing products in the fishing communities into fisherwomen associations. These fisherwomen associations help women to receive their social benefits from the fishing activity, and meet regularly to implement their fishing projects in the community (Andrade 2006). Fishermen and fisherwomen are very active in their community. During the 1980s, thanks to the movement of local fisherfolk and respective fishing guilds, the Environmental Agency of Alagoas, IMA, created the first protected environmental zones, one in the

region of Piaçabuçu municipality and another in Penedo. Conflicts over fishing territory and land still exist between local fishermen, federal branches of development agencies and large sugar mill distillers as the latter are pushing the agricultural frontier towards fishing communities' last remaining wetlands.

Figure 1 – The São Francisco River



Source: ANA, Landsat 2001.

### **Politics of choice, citizenship, identity and belonging**

Since 2003, the federal government - the Federal Bureau of National Integration (MIN), Federal Bureau of Environment (MMA), Brazilian Environmental Agency (IBAMA), National Water Resources Agency (ANA) and the Watershed Committee of the São Francisco River (CBHSF)- decided to decentralize the implementation of the Revitalization Plan for the São Francisco River, to tackle locally both environmental and social problems. The Revitalization Plan, however, has brought points of argument into the local level. First, broad sectors of local population have objected the implementation of the water diversion from the São Francisco River to other basins, the most controversial project included in the Revitalization Plan, for cultural, economic and ecological reasons: all referring to African-Brazilian and Indigenous-descendant artisanal fishermen conceptions of loss of livelihood resultant from declining fish stock and diversity. Second, the Revitalization Plan proposed a project to increase fish farming



production to minimize fisheries decline, and attract outside investors, farmers, and large-scale and small-scale fishermen, especially to expand the aquaculture sector in the Lower São Francisco River. Aquaculture projects have made many artisanal fishermen resent the legal requirement to obtain permits for fishing and for fish farming on the river, while others resent lack of micro-credit, and others still protest against past displacements from the floodplains where some those aquaculture projects have already been implemented. Decentralization of federal projects, such as increasing investment on aquaculture projects in Piaçabuçu and Penedo towns, are having different effects on local democracy, especially on respective fishing communities.

To illustrate this point, the paper chose to study government-led water and fishing policies in Penedo and Piaçabuçu to observe the different effects on consolidation of local democracy. Since 1985, Penedo and Piaçabuçu have democratically elected mayors and city councillors. Penedo had most of the time elected male mayors representative of the elite of large sugar cane distillers, intellectuals and local business, while Piaçabuçu had both female and male mayors, representing the interest of the local elite as well. Both municipalities have secretariats of planning and finances, of health, education, and social assistance. Recently, environmental issues entered the local agenda, but municipal participation in regional watershed committees was not enough to create municipal environmental departments or even autonomous secretariats of environment. For example, the participation of the municipalities on the São Francisco in the Watershed Committee (CBHSF) since 2001 did not ramp the creation of municipal environmental secretariats. In mid-2004, however, since the Revitalization Plan's funds have been transferred, more than 50% of the municipalities created independent environmental secretariats. Piaçabuçu had an environmental secretariat before 2001, while Penedo created an environmental secretariat at the end of 2003 (IBGE 2004), thanks to the approval of transfer of royalty and funds coming from the Federal Bureaus of National Integration, of Environment and of Energy (MIN 2003).

Table 1- Penedo and Piaçabuçu

| Municipality | Year created | Area* (Km <sup>2</sup> ) | Population* | Urbanization* | Environmental Secretariat | Environmental Protected Zone |
|--------------|--------------|--------------------------|-------------|---------------|---------------------------|------------------------------|
| Penedo       | 1842         | 689                      | 59,968      | 72%           | Yes, since                | APA Marituba                 |

|           |      |     |        |     |                 |               |
|-----------|------|-----|--------|-----|-----------------|---------------|
|           |      |     |        |     | 2004            |               |
| Piaçabuçu | 1952 | 240 | 16,688 | 60% | Yes, since 1995 | APA Piaçabuçu |

Source: Andrade (2006), (\*)IBGE 2004

Royalty fund transfers enabled many municipalities to participate in the implementation of many projects of the Revitalization Plan, with the support and approval of the CBHSF. To illustrate this point, until 2004, both Penedo and Piaçabuçu environmental secretariats used to lack environmental funds and depended greatly on the funds from local branches of federal and state agencies to implement environmental management. For example, since 1997, CODEVASF and local fishermen in Penedo have managed a project to increase fish stock in the APA of Marituba wetland. CODEVASF funded most of the operation of the project by providing large amounts of hatched native fish, while fishermen were supposed to control fishing activities to conserve fish stocks. In 2005, with funds coming from the Federal Bureau of National Integration to promote local initiatives for the regional Revitalization Project, the municipality of Penedo is still not partnering with CODEVASF and local fishermen to repopulate the river with native fish (CODEVASF, 2006). Penedo municipality is absent in planning and implementing fishing management projects because the mayor and the city chamber's priorities are directed to revitalize tourism not fisheries activity. Penedo was chosen by the Bureau of Culture and the World Bank / UNESCO Program to host the National Heritage Museum of the São Francisco River, where infrastructure, sanitation and beautification projects have higher priority than recovering fish stocks.

In the case of nationwide fisheries management, since mid-1980s democratically elected fishermen presidents of the fishing guilds (see Table 2) show to be recognized representatives by their communities and have received local power to implement some institutional aspects of regional and local fishing management (divided by regions, states, municipalities, watershed and ecosystem type: mangrove, marshland, reefs, etc) and have been actively players in proposing national fishing agenda, while having downward accountability to its members and communities and upward accountability in regional and national level.

Table 2– Number of fisherfolk associated and not associated with the fishing guilds at regional basis.

| Region    | Number of fishing guilds | # Fishing guilds with fisherfolk president before 1986 | # Fishing guilds with fisherfolk president after 1986 | Fisherfolk associated with guilds | Fisherfolk not associated with guild |
|-----------|--------------------------|--|---|-----------------------------------|--------------------------------------|
| North     | 54                       | 0  | 27  | 55,558                            | 48,178                               |
| Northeast | 157                      | 0  | 133   | 104,759                           | 168,556                              |
| Southeast | 55                       | 0  | 14  | 47,552                            | 33,907                               |
| South     | 33                       | 0  | 10  | 57,506                            | 37,856                               |
| Total     | 299                      | 0  | 184   | 265,375                           | 288,497                              |

Source: Confederação Nacional dos Pescadores – 1986 (National Confederation of Fishworkers)

The states with a larger number of artisanal fisherfolk associated with fishing guild are:

Pará, Maranhão, Rio de Janeiro, Bahia, Santa Catarina, São Paulo, Rio Grande do Sul, Ceará and Alagoas.

Currently, all the fishing guilds in Northeast and North Brazil have democratically elected presidents. However, fishing guild democratization does not guarantee representation of artisanal fishermen in municipal fishing management on the São Francisco River. For example, since the 1990s, fishing guild Z-12 in Penedo has been trying without success to elect as a municipal councillor the nationally recognized fishermen’s leader, Seu Toinho. Exceptionally, in 2005, fishing guild Z-19 was able to elect for the first time a fisherman, Antonio Veiga, as a councillor to Piaçabuçu’s Municipal Chamber. Antonio Veiga has been actively working in the local legislative and with the environmental secretariat to create a municipal fishing committee.

How can the local politics help us to understand the effects and impacts of having (or not) elected fishermen representatives as municipal authorities for fishing management under the Politics of Choice of the Revitalization Project on the São Francisco River? According to the former Z-19 fishermen president, Antonio Veiga, the elected city councillor for Piaçabuçu Municipal Chamber in 2005, the Revitalization project launched a wave of optimism in his fishing community:

‘We are able to access microcredit and participate in the elaboration of aquaculture projects. Our fishing community has a voice inside the government and is getting organized in cooperatives together with the municipal government to implement many projects, to improve the river ecology and our fish business. We [Z-19] have never been so part of the process in the decisions taken about fish farming as before.’<sup>2</sup>

<sup>2</sup> Phone interview 2 December 2005

While Seu Toinho, from Penedo tells us a different story:

‘The Revitalization project is only benefiting the same elite people. Since 2001, we, fishermen, were able to organize and mobilize the population to create and celebrate ‘The day of cleaning the Old Chico River’ with the municipality of Penedo. But when we talk about working together to stop declining fisheries or clean our public lagoons, the municipality just ignores us. They have other projects in mind with the money of the Revitalization project: to create museums, and support large aquaculture projects for example. We have very little voice on how they will use the money. There is money, lots of it now in the hands of the municipality, but little is given to increase the participation and awareness of the local population to restore our fish back to the river.’<sup>3</sup>

As we see in Seu Toinho’s complaint, we can infer that the public domain of fisheries management is decreasing in Penedo thanks to decentralization of natural resources captured by the local elite. In Antonio Veiga’s case, on the contrary, there is an increase of public domain in decisions about fish farming for example, in the current decentralization, because most of those decisions in the past have been carried on by state and federal fishing development and environmental agencies, especially for licensing, planning and fomenting. Can we attribute those changes in public domain to complex issues of citizenship, representation and institutional choices made by SEAP and several federal bureaus?

Since 2005, for instance, SEAP (National Bureau of Aquaculture and Fisheries) has chosen to cooperate with some municipalities where fishing guilds are well organized (e.g. Penedo and Piaçabuçu) and respective municipal environmental secretariats in zoning, planning for fish farms and decentralizing the highly centralized process of licensing for fish farming cooperatives. Most cooperatives in Piaçabuçu and Penedo are composed by local and non-local investors and farmers while few cooperatives are composed by fishermen from Z-19, and Z-12 fishing guilds respectively. SEAP institutional choice to work with local cooperatives and guilds has to do more with the lobbying of large aquaculture investors and technicians, as we will see ahead, than with the lobby of artisanal fishermen, however both fishing communities in Penedo and Piaçabuçu have also been chosen to manage those projects because of previous local administrative arrangements and to develop technical capacity.

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<sup>3</sup> Phone interview in 14 September 2005

For example, in 1998, Seu Toinho received R\$30,000 award for his environmental activism, and donated the money to the Z-12 fishing guild, that decided democratically to start a tilapia fish cage cooperative. The cooperative would work as a pilot project to educate fishermen into fishing farming technique and technology. Twelve members were chosen by lottery and a system of rotation was implemented after 2 years. The first cooperative received technical support from the local branch of the Federal Agency of Development of the São Francisco River, CODEVASF and from SEBRAE, a private think tank that is also a government partner to give consultancy to small business. After three years of struggling to have a fish farm license issued, the project was finally implemented in 2001. Alas, in 2004, after a large flood the entire project was destroyed, this small cooperative joined funds with a local larger fish farming cooperative owned by a fish engineer who works for the local branch of a national agriculture research (EMBRAPA), and who was also lobbying for the transfer of funds from SEAP to the municipality of Penedo. Different from Piaçabuçu fish farming cooperative case, Penedo's fish farming cooperative became coopted by local elite interests, while the fishermen interests and needs in the decentralization of fisheries management became less visible. Can lack of visibility be related to fisherman identity fragmentation? Seu Toinho explains what this fragmentation means to his community:

‘When fisherfolks from the Lower São Francisco, from Z-12 and Z-19 for example, ask for high flows or ecological floods to restore native fish, we have less voice, because those high flows compete with the interests of aquaculture inside the river. We feel trapped inside the interests of those fish farming cooperatives and some fisherfolk are divided by other-than-fishing interests. And the government alleges that we are not authentic artisanal fishermen anymore, as ‘we are becoming entrepreneurs’. But not all of us, just a small part of us is dedicating to fish farming.’

Discussion on fragmentation and authenticity is a serious issue, as artisanal fisherfolk identity in Penedo is becoming fragmented thanks to an increasing number of fishermen in Penedo and nearby municipalities entering the aquaculture business. According to one of the Z-12 fishermen, Antonio Rodrigues, 50 years old, their identity as artisanal fishermen is changing in face of the river environmental degradation and a new generation of fishermen interested in fish farming:

‘We are artisanal fishermen, but in this case I think this will only last for a short time. For us to survive [in the long term], most of us will have to enter the industrial fishing farm.’

The problem with identity fragmentation is highlighted by Fabio Castello Branco<sup>4</sup>— a fishing engineer, the executive coordinator of the aquaculture projects from the *Instituto Xingó*<sup>5</sup>, and senior researcher from the University of Alagoas, who coordinated of the studies for the Global Environmental Fund- São Francisco (Branco, 2003) to advise the Watershed Committee (CBHSF): Branco emphasizes how aquaculture will substitute the displaced artisanal fishing activity in the lower São Francisco River. Branco believes that ‘the artisanal fisherman in Penedo lost his authenticity,’ and adds, ‘it is evident that a process of extinction of the artisanal fishing is happening, and the possible economic alternative to the fishermen is aquaculture or ecotourism.’ Then he concluded: “the artisanal fisherman at the lower São Francisco is a specimen in extinction.”

Branco’s view point directs us to examine the notion of authenticity to be able to understand how citizenship along the São Francisco River is constructed around ideas of legitimate identities. Questioning whether a fishing community can still be authentic when the river environment changes, and therefore have a voice as such, the state runs the risk of falling into notions of stability/place/home/identity as fixed, of identity and sense of belonging being stable in a fixed location. In that sense, it is important to acknowledge the ability of the displaced and fragmented fishing communities in Penedo and Piaçabuçu to become “creative agents in the construction of their history”, and “keep their canoes inside the river” fishing, even if some will fish farm. Andrade (2006) argues that Penedo fisherfolk communities are transforming themselves, but still maintaining alive their cultural ties and sense of belonging to the river and fishing communities while coping with environmental and political changes.

### ***Fishing and aquaculture management***

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<sup>4</sup> Interview Branco, 23 April 2003

<sup>5</sup> A think tank institution funded by the Electric Utility of the São Francisco river (CHESF), CODEVASF and federal universities of Sergipe and Alagoas, especially to mitigate the environmental-social problems caused by the construction of Xingó dam on the river in 1992.

Though SEAP, IBAMA and IMA promote sustainable fishing on principle, there are few problems with their ability to enforce the environmental fishing law – either to guarantee sustainability or stop illegal fishing during the period of *defeso* - prohibited fishing period because of the *piracema* (fish reproduction cycle from December to March) in the river. Illegal fishing may account for at least 30% of the all fishing in Penedo (Z-12 president per. communication 15<sup>th</sup> December 2005). In mid-1990s, IBAMA created strict rules for fishing in the São Francisco River (size of mesh, type of fishing gear, and max seasonal catch), however they are hard to enforce, especially when many people fishing illegally do not have their license as professional fisherman, and do not know the rules. IMA personnel is also viewed as negligent by some, for allowing illegal riverine deforestation affect the fishing habitats, and for letting illegal shrimp farming projects, for example, being constructed in ecological sensitive marshlands, where local fisherwomen fish<sup>6</sup>. SEAP has been a source of uncertainty to the community as well, at least at initial levels. As fishing regulations pass from one agency to another, women and men who fish professionally in Penedo lose confidence in the federal government's ability to regulate, offer them viable choices, or provide social benefits such as the unemployment insurance during the *defeso* period. One fisherwoman, Angelucia, the president of fisherwomen association in Penedo, has been struggling to extend the unemployment insurance to fisherwomen, who until recently were not recognized as such. Her comment on the institutional transition reflect o their situation:

'Before there was SUDEPE, then IBAMA, and then the Agriculture Bureau, and we started to have many problems with late payments of unemployment insurance (for them and their husbands). When IBAMA was responsible for fishing regulations, we could go to their office in Penedo and we could get the payment with a claim form. Then when it changed to the Agriculture Bureau, we had to send Piau and Seu Toinho to Maceió, and one claim form was not enough. It was very hard for us. All the payments got stuck in the bureaucratic transition. It is even worse now with the new Bureau of Aquaculture and Fisherie (SEAP). I think the problem [late unemployment insurance] will continue, only its name changed. The president (of Brazil) thinks he did a great favor for us (creating the SEAP), but we still have to buy food for our children during the *piracema* period. Fishing small fish is not a business possibility anymore. We don't know what to do then.'

As a consequence over fishing management and social economy, fisherwoman and fishermen are demanding that the municipality of Penedo follows the example of Piaçabuçu and creates a municipal fishing committee to stimulate and enforce fishing

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<sup>6</sup> Per communication with Seu Toinho, and Angelucia, 12<sup>th</sup> October 2005)

policies locally. So far, the Z-12 fishing guild has been the intermediate institution between IBAMA, federal development agencies and SEAP, in implementation of fishing management. The fishing guild funds are very small (collect 5% of the fish sold in its fish market) and not sufficient personnel to control illegal fisheries for example. Seu Toinho, and two other old fishermen together with local teacher schools formed an environmental ONG *Filhos do Velho Chico* (Children of the Old Man River) at the urging of Penedo mayor in 2001, because of what they perceived as problems of uncontrolled fishing, riverine forest deforestation, increasing urban pollution and need of environmental education (interview June 2001, July 2003). Since 2004, NGO *Filhos do Velho Chico* have received small funding from SEAP and more recently from the Revitalization project to implement local projects, but rather than threatening people that is illegally fishing, the emphasis is on environmental education, cleaning up urban shores and reforestation of riverine vegetation projects.

Seu Toinho, 75, former president of Z-12, current vice-president of the Fishermen Federation of Alagoas and elected member of the CBHSF, is a religious and a cultural authority in Penedo, Alagoas State and along the Lower São Francisco River<sup>7</sup>. He alone symbolizes the history of fishermen's movement to citizenship rights during the military regime in the 1960s and the 1970s. Seu Toinho is also recognized by his traditional ecological knowledge (, Marques, 1992 and 2001; Silva, 1990), as he also helped many environmental campaigns 'to save the São Francisco River' as a holy-ecological place (Andrade 2006, Santos 2004).

'The river was once abundant of fish, many generations of fishermen before mine were able to feed their families, build their homes and construct their fishing tools with what came from the river. Now the river has little fish and is dying, that is the reason we need to save the river and its ecology, as it is our life-force, our generous Father.'

*Filhos do Velho Chico's* concepts of fisheries and river is challenging SEAP's, the Bureaus of National Integration's and ANA's, as purely sources of income and commodity, rather than appreciating their ecological, spiritual and cultural values. In a meeting with other members of the CBHSF, Seu Toinho discussed the feasibility of an

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<sup>7</sup> Thanks to the CEBs, Seu Toinho is recognized as an authority not only by his local fishing community and the CPP, but by a nationwide network of people working with the São Francisco River.



aquaculture proposal project to solve the fishermen's problem in his region (supported by SEAP and the Bureaus above):

'If each fisherman in Penedo and Piaçabuçu, Neopolis etc decides to put four fish cages inside the river, as proposed, the river will be paved as a cobble stone street. We are going to kill the river, where many of our native fish is already struggling to live. Imagine if fish disappear, then how can we live?'

It is important to recognize that there are fishermen from Penedo and Piaçabuçu that see aquaculture as a legitimate enterprise and has been involved in fish farming for income, ironically including fishermen on the board of the *Filhos do Velho Chico*. Nevertheless, overfishing relative to the sustainable yield would have been rampant without the role played by the fishing guilds, fishing leaders, IBAMA/ IMA and SEAP authorities.

Meanwhile, in 2005, the municipality of Piaçabuçu has created a fishing committee along with the Z-19 fishing guild articulating goals for fisheries management. Piaçabuçu municipality is less urbanized and has a larger proportion of fisherfolk than Penedo municipality, and at the same time Piaçabuçu has one of the largest and oldest environmental conservation area (APA- Piaçabuçu) in the region. Those factors might explain partially why fisherfolk in Piaçabuçu were able to articulate and elect a fisherman as a city councillor, and Penedo not, while both fishing communities are struggling to survive in a river that has seen better days of abundant fisheries before the dams were built (Andrade, 2006; Branco, 2003; Montenegro, 2001 and 2002).

Another important factor that contributes to Piaçabuçu Municipal participation in fisheries management is how the environmental secretariat, and presently the newly created fishing committee, have been actively working with local fishing communities. Since its creation to support the APA-Piaçabuçu, in the 1990s, Piaçabuçu's environmental secretariat engaged in partnerships with resident community of fishermen and with local branches of federal and state development (e.g. CODEVASF, SEAP) and environmental agencies (IBAMA, IMA), universities and regional environmental NGOs (IPMA). Under the Revitalization project, Piaçabuçu's environmental secretariat has focused in the establishment of an environmental plan to increase ecotourism. With the support of SEAP, Piaçabuçu's environmental secretariat has helped to create aquaculture

zoning and fish repopulation projects in the APA-Piaçabuçu, together with traditional Afro-Brazilian fishermen communities that live in this APA<sup>8</sup>.

### ***Public Domain***

The increase of public domain in decentralization is clear in the case of Piaçabuçu, where the transfer of power to the municipality's environmental secretariat and the increasing participation of artisanal fishermen in the local government have enabled decentralized fisheries management and river preservation in the municipality region. Some factors may have benefited democratic decentralization in Piaçabuçu: first, the fisherfolk comprise a large proportion of the municipality's population (mostly with a monthly income around minimum wage); second, previous involvement and trust had already been established between the municipality and the population in environmental conservation areas; and finally the institutional choices made by SEAP and the Bureau of National Integration through the Revitalization project articulated in working with the municipal environmental secretariat to help coordinate fishing management and river preservation practices.

In Penedo however, the public domain in fisheries management is diminishing thanks to the institutional choice made by the Revitalization project and SEAP that have exacerbated historical inequalities: first, significant funds towards municipal environmental secretariat are being targeted at other than fishing management priorities; second the funding of aquaculture cooperatives attend primarily to interests of the elite rather than to the majority of poor fisherfolk; and finally, only small amount of funds for fisheries management and river conservation are allocated to the Z-12 fishing guild and to *Filhos do Velho Chico*, because of lack of historical municipal involvement in fishing management.

### **Conclusion**

The Brazilian case lends credence to the notion that history shapes contemporary context for citizenship and representation. The Politics of Choice are at least to a degree

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<sup>8</sup> Formed exclusively by ex-quilombos: runaway slaves who escaped sugar cane plantations and came to live in the São Francisco River floodplain.

based on the role of history of powers of existing local institutions and individuals and the relationship of those institutions/individuals to government bodies and donors. By examining the process of institutionalizing participatory and decentralized watershed and fisheries management in Brazil, we find that in Penedo and Piaçabuçu, the effects of decentralized water resources and fisheries policies along the lower São Francisco River created different outcomes in those neighbouring municipalities, where public domain was undermined and expanded respectively. Findings suggest that, to be effectively democratic and to reflect the interests of local artisanal fishermen in the lower São Francisco River, municipal “participation” in fishing management and the implementation of the revitalization projects should include the participation of traditional communities in natural resources management. It is clear that when municipalities represent and consult historically and culturally legitimate identities, in which collective action is validated by the members of the local community themselves, and helps to consolidate local democracy in natural resources. However this study illustrate that ideas of legitimate identities and belonging should not be fixed as “authentic”, because those ties to a place and a community are dynamically changing as environmental and political changes are imposed in those communities.

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