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CAIÇARAS, CABOCLOS AND NATURAL RESOURCES: RULES AND SCALE PATTERNS*

ALPINA BEGOSSI**

SUSTAINABILITY: A FUZZY CONCEPT ?

In spite of the well known definition by the World Commission of Environment and Development, the “Brundtland Report” (1987), that sustainability is concerned with meeting the needs of present generations preserving the opportunities available to future generations (Perrings, 1994), it still embodies a variety of meanings. Goldman (1995) shows different definitions of sustainability found in the literature, from food efficiency, to stewardship, to the capacity for indefinite survival of the human species. Gatto (1995) shows definitions given by the applied biologist (sustained yield), the ecologist (sustained abundance and biodiversity), and the economist (similar to the Brundtland Report’s definition). Goodland (1995) describes social, economic and environmental sustainabilities. Actually, the definitions show how sustainability is something difficult to grasp. Ehrlich (1994) alerts to the fallacy of a general assumption (including here the Brundtland report), that global economic activity can be safely multiplied five- to ten-fold, or even more. The author stresses how the level of knowledge in ecology is still insufficient to determine how much biodiversity should be preserved to avoid large regional and even global collapses of ecosystem services¹. For Holling (1994) sustainable development is a paradox because something must change and something must remain constant; one paradox suggests that the diversity of life is a function of a small set of variables, each operating at different speeds, with a few structuring processes occurring at different scales: ecosystem dynamics include a small number of nested cycles, each driven by a few dominant variables. The second paradox suggests that the management of ecological variables led to more brittle ecosystems, more rigid management institutions, and more dependent societies.

Sustainability comprehends both the links of society to nature as well as the constraints imposed on human activity by the environment (BECKER *et al.*, 1997). These authors stress the importance to interrelate processes at different levels (local, regional, national, global) and to consider three dimensions of sustainability: 1. by defining non-sustainable states and processes (*analytical*); 2. by considering the compatibility between social, economic and environmental goals, as well as equity

and social justice (normative) and 3. by implying in a system of governance, from local to global levels, implementing policies, and identifying non-sustainable mechanisms (strategic).

One of the central questions is how to link sustainability in a gradient scale local-global, including criteria, rules, rights, and institutions that work towards it. How local and small communities are linked to a global world and how local behaviors that transcend *in situ* responses are important variables to reach sustainable local developments. Livelihoods may start those linkages: these points are illustrated with particular cases from the southeast coast (Atlantic Forest) and northern (Amazon) Brazil.

SCALE: LOCAL COMMUNITIES AND INTERACTIONS

Scale is a basic question for general ecology, since different questions are drawn and analyzed according to the level approached (BEGOSS, 1997). It refers to resolution (such as spatial grain size, time step), and to the extent in time, space, and number of components modeled (CONSTANZA, 1996). Solbrig (1992) shows that different levels of analysis on biodiversity are fundamental for management: going from the biodiversity of genes, to species (the ultimate source of biodiversity); to the community (patterns of species richness); and to biogeographical (spatial scale, immigrations and extinction's) and ecosystem levels (the biosphere and global change).

Patterns of scale related to conservation in a fine/low/local scale, include knowledge of species, population dynamics, resource uses and users, and the value of natural resources; at coarse/high/broad scales, they include common management², landscape ecology, and political ecology (BEGOSS, 1997).

In both ecology and economics, primary information and measurement are collected at small scales (plots, farms) and are used to build models on regional or global scales (CONSTANZA, 1996). Levin (1992) stresses that there is no 'correct' scale on which to study populations or ecosystems and that we should understand how information is transferred from fine to broad scales. According to Holling (1994), the lessons for both sustainable development and biodiversity are clear because it is the physical and temporal infrastructure of biomes at all scales that sustains the 'theater'.

In human ecology, information is usually collected from local communities at small scales, such as individuals or families. As in general ecology and ecological economics, a tricky question is how to deal with the local information to make general predictions and analysis that go beyond the local community and reach global issues. For example, how is the information collected on local subsistence used for general propositions of management, integrated with regional, national and global institutions?

Local analysis on livelihood dimensions may help creating bridges through different scales. The concept of livelihood helps to understand the factors that influence the lives, and well being of people, and it is based around the dynamics of living, such as the means to obtain goods and services (SOUSSAN *et al.*, 1999).

THE CAIÇARAS AND THE CABOCLOS

The information that follows is found detailed in Begossi (1996; 1998).

The caiçaras: populations living in the southern part of the Atlantic Forest coast are called *caiçaras*, and are somehow the analogue of the Amazon *caboclo*: both descend from Indians and Portuguese and depend on agriculture, but especially on fishing, for cash and for subsistence.

The *caiçara* communities studied are located in the northern coast of São Paulo State and the southern coast of Rio de Janeiro State. In general, communities have small populations, ranging from 12 families (islanders) to 100 (coastal communities).

Among the *caiçaras* agriculture is usually based on manioc (the main crop), but it may include potatoes, yam, beans, and a variety of fruits. In the processing of manioc to produce flour there are techniques, which go back to indigenous practices, in order to get rid of the toxic cyanidric acid. Many different plant species are used by the *caiçaras* for food, medicine, handicrafts and construction (BEGOSSI *et al.* 1993).

Fish is the main source of animal protein for the *caiçaras*, ranging from 52% (Puruba Beach) to 68% (Búzios Island and Gamboa) (Table 1). Common marine animals used for food and sale are, at Búzios Island, bluefish (*Pomatomus saltatrix*), squid (*Loligo sanpaulensis*) and halfbeak (*Hemiramphus balao*); at Puruba, snook (*Centropomus parallelus*) and mullets (*Mugil spp.*), besides freshwater catfish; at Sepetiba Bay, shrimp (*Pennaeus schmitti*), sand drum, weakfish (many Sciaenidae), mullets and kingfish (*Menticirrhus americanus*).

The caboclos: just as for the *caiçaras*, manioc cultivation and production of manioc flour are typical for *caboclo* subsistence as well as slash-and-burn techniques used for cultivation, and a variety of fruits from trees and from the high diversity of palms are collected in the Amazonian forest. While we found communities showing a detailed knowledge of medicinal plants, other communities may have lost part of this knowledge.

Caboclo livelihood is based on small scale agriculture with the cultivation of manioc, maize, rice, beans, water melon and papaya and fishing in the rivers, *igarapés* (small rivers) or *igapós* (flooded forest). River water level is usually important for the *caboclos*, because their subsistence follows river conditions: when the water is low ("summer"), fishing is an important activity; when the water is high, in the wet season ("winter"), wildlife hunting in the forest tends to be important for subsistence. At the Upper Juruá Extractive Reserve, *mandi* (species of *Pimelodella*, *Pimelodina* and *Pimelodus*), surubim (*Pseudoplatystoma fasciatum*), Curimatidae (*Prochilodus nigricans*), as well as species of the families Loricariidae (*bodes*) and Anostomidae (*piáu*) are very important for consumption. We observed that game was a very important protein source in the wet season at the Upper Juruá, when deer, peccaries, monkeys, and small-rodents are hunted (BEGOSSI *et al.*, in press).

Caboclos and *caiçaras* both have detailed knowledge on their environment. Differently from the *caiçaras*, the *caboclos* show different levels of interaction at regional, national and global scales.

SCALE OF INTERACTIONS OF THE COMMUNITIES: FROM LIVELIHOODS TO LOCAL MANAGEMENT

The *caiçaras*' strategies of decision-making concerning fishing or farming, or even local disputes, are variable among communities. In some communities, such as at Búzios island, the lineage system based on kinship is dominant. Decisions are usually a family task and leadership is an attribute of the older, which are usually consulted over problems related to the community (BEGOSSÍ, 1996).

On the other hand, at Sepetiba bay, fishermen discuss communal problems at organized meetings and leadership is a consequence of local activities and fishing. Fishermen perceive the importance of the bay as a spawning and growing resort for marine organisms and the impacts caused by the industrial fishery. Fishers involve local politicians and the local press in the defense of the bay against intruders, such as industrial fishers. Relationships among resource areas, property rights, and the scale of management may be drawn. For example, where individuals or families own spots, local simple rules that avoid overlapping uses are observed. Where local communities perceive bays, lakes, or spots in the forests as resource areas, local capacity for a co-management, as well as capacity of self-organization may develop (BEGOSSÍ; 1995; 1998; in press).

Contrary to the informality of most *caiçaras* in dealing with internal and external questions, *caboclos* are organized in associations and participate in local environmental politics. For example, fishers from the Lower Amazon river have developed new management strategies for lake fisheries, involving the exclusion of outsiders and regulating fishing activities (McGRATH *et al.*, 1993); rubber-tappers (*seringueiros*) have organized themselves in associations and created Extractive Reserves, an example of common management practice.

Extractive reserves are defined as "forest areas inhabited by extractive populations granted long-term usufruct rights to forest resources which they collectively manage" (SCHWARTZMAN, 1989), and legally defined as "territorial areas used by extractive populations for sustainable exploitation and natural resource conservation" (Decree 98.897, January 30, 1990). The first Extractive Reserve (Upper Juruá) was legally established in 1990. This Reserve is located in the State of Acre in Brazil. It includes about 860 families of rubber-tappers and small farmers and it is managed by the ASAREAJ (Association of rubber-tappers and farmers of the Extractive Reserve of the Upper Juruá - *Associação dos seringueiros e agricultores da Extrativista do Alto Juruá*) and by the CNS (National rubber-tapper council - *Conselho Nacional dos Seringueiros*). The organization of the reserve is an activity involving local people in meetings, along with researchers, and representatives of the councils. As a result of local meetings, in 1994, a first management plan was proposed by the Rubber-Tapper Council and approved by the Environmental Federal Agency (IBAMA).

Caiçaras have responded to local conflicts involving industrial fishing and environmental state regulations (BEGOSSI, 1995) at very specific levels, usually at an individual-familiar scale. In the coastal fisheries of the Atlantic Forest coast, apparently, communities that employ fixed gear, have market interactions, and include different types of fishers (trawlers, tourists) tend to develop local territorial rules and capacity of self-organization. High fishing density and market pressures generates conflicts in the use of resources that can be solved by building up local rules and institutions (BEGOSSI, in press).

Caboclos, influenced by the Liberation Theology and leftist parties, built strong political organizations and movements, that culminated in the common management of resources through extractive reserves. In the case of the Alto Juruá, State of Acre, communications channels among the scattered families along the Juruá river were fulfilled by the radio *Verdes Florestas* (BEGOSSI, 1998). The range of *caboclo* action includes local communities (alliances of the Forest People), regional politics (Worker and Communist parties: *Partido dos Trabalhadores* and *Partido Comunista do Brasil*, among others), national politics (the creation of Extractive Reserves) and transnational behavior (such as *Chico Mendes* case). Observe (Table 2) that to work towards a common management practice, it is important to interact at higher scales, beyond individual-family levels. The different behavior of *caiçaras* and *caboclos* as well as their different approach to local and regional institutions led to different practices for management and conservation. Ostrom (*in press*) observed that when resources are abundant, there are few reasons to invest effort in organizing, but when resources are already destroyed, the high costs may not generate sufficient benefits: self-organization probably occurs after observing substantial scarcity.

MARKET DEMANDS

Both *caiçaras* and *caboclos* local subsistence and economy is based especially on fish, on the production of manioc flour, and (in the case of *caboclos*) on rubber and nuts, with participation in the regional market.

Regional market demands for the *caiçaras* were associated with the economic cycles of the last century, such as sugarcane (before 1800), coffee (1800-1870), and again sugarcane (including the production of rum) in the first half of this century (FRANÇA, 1954). After the fifties, fishing replaced agriculture as a source of cash (BEGOSSI *et al*, 1993).

The *caboclos* participation in the regional economy was especially through agriculture, such as rice, juta (*Corchorus* sp.) and malva (*Malva rotundifolia*), among others; mining, timber extraction, cattle ranching and extraction of rubber and nuts (FEARNSIDE, 1991). Moran (1993) stressed the importance of cattle ranching as a source of deforestation in the Amazon, which represents about 10.5% of the original forest (FEARNSIDE, 1995). Commercial fishing replaced agriculture in the area of the Amazon *varzea* (floodplain), as showed by McGrath *et al.* (1993). Differently from the Atlantic Forest, the Amazon has always been an area of international attention.

For example, international agencies, such as the World Bank and IDB (Interamerican Development Bank) lent funds for projects in the Amazon such as the Polonoroeste (Northwest Regional Development Pole), Planacre, and Grande Carajás (mineral deposits) (FEARNSIDE, 1987).

Besides the local subsistence and the regional economic cycles, associated with both *caiçaras* and *caboclos*, international attention, funding and projects have usually been a typical feature for the Amazon region. Historically, *caboclo* communities and culture have been more part of the global economy rather than the *caiçaras* of the Atlantic Forest.

Local history along with political alliances, and international interactions might explain why we find a communicative and interactive behavior among the *caboclos*, and relative isolated behaviors among the *caiçaras*. The importance of historical patterns of settlement, of colonization, and of economical interactions associated to environmental degradation are found in the literature (AMANON, 1994; FRANKE & CHASIN, 1980).

The relative political isolation of *caiçaras* is currently helped by a high religiosity, with many adepts of Pentecostal Churches (God Assembly, Christian Congregation, Adventists, among others). Associated with the local history of *caboclos*, international concerns were historically associated with Amazonian areas. International environmental concerns regarding the Atlantic Forest are more recent and have not the same tradition as found in the Amazon.

SCALE AND RESILIENCE: FROM LOCAL TO GLOBAL ISSUES

Livelihoods may be vulnerable, and its counterpart is resilience: to what extent are livelihoods able to stand after shocks and still prosper (SOUSSAN *et al.*, 1999)?

The term *resilience* is an ecological concept associated with stability. It represents the ability of a system in keeping its structure and function after disturbance: it is characterized by events far from the equilibrium, it stresses the boundaries of stability, and it shows high adaptation and variability (JANSSON & JANSSON, 1994). Holling (1992) defined cycles organized by four functions: exploitation, conservation, release and organization. In this case, resilience is determined by release and reorganization sequence.

Cultural behaviors may contribute to ecological resilience, showing practices that increase biodiversity or that avoid overexploitation (FOLKE *et al.*, 1998) and interesting attributes. On the one hand, it is the high flexibility of human behavior that made humans adaptable to different environments; on the other hand, human behavior may be very conservative and hard to change (or resistant), as seen in traditions. Changes of behaviors, or the maintenance of traditions, may or may not be ecologically sound depending on the context of the interaction between resources and users.

The high variability of *caboclo* interactions, and their responses associated with their communicative interaction with institutions at various scales, resulted in a resilient system of management (Extractive Reserves), compared to the *caiçaras* (predominantly individual-familiar management practices).

The implications of such behavior that transcend the local community to interact at various scales are important for management, because:

a) the resilience of the ecological system increases, because *locals* are managers of natural resources. It is not a case where the State regulates some area only officially defined, such as conservation areas without clear boundaries and supervision;

b) the resilience of the cultural system becomes strong, because the community may increase their capacity to survive in terms of the local economy, subsistence and cultural attitudes;

c) the community may guarantee, at national level, the state contribution to local initiatives (such as the legalization of Extractive Reserves by IBAMA).

d) the community may enforce their local/national management approach through international pressures (Extractive Reserves, Chico Mendes case).

When incorporating the concepts of natural capital and of human-made capital³, a sustainable society is defined by Ferreira & Viola (1996) as maintaining the natural capital available, or compensating it through development of human-made capital, and reducing the depletion of natural capital (allowing it for future generations). Daly (1994) observed that sustainability has also been incorporated into the definition of income as the maximum amount that a community can consume over some period and still be at the end of the period as at the beginning. The author pointed out the definitions of *strong* and *weak* sustainabilities: the first considers natural and man-made capital as substitutes; the second view considers them as complements. Even if a weak sustainability might improve current practices, strong sustainabilities is what really matters in the global environmental context, because production of man-made capital depends on the availability of natural capital. Daily & Ehrlich (1996) stressed that carrying capacity embodies the concept of sustainability: it is any process maintained without interruption, weakening or loss valued qualities.

Patterns of livelihoods associated with their vulnerability to external factors (markets, environmental legislation), and to their resilience, link them to large-scale systems that may show a variety of ecological footprints, depending on the way their livelihoods depend upon. Ecological footprints reflect the actual consumption and waste production patterns of a group: they may be quite larger than the land areas they occupy (REES & WACKERNAGEL, 1994).

Ecological economics deals with the problem of scarcity of resources, or with depletion of natural capital, a question not included in classical economics, which was performed for an “empty world”, or a world without limits for exploitation (HARDIN, 1993). As pointed out by Constanza (1996), ecological economics views the socioeconomic system as part of the overall ecosphere, emphasizing carrying capacity and scale issues associated with human population growth, systems of property rights

and wealth distribution. Folke *et al.* (1994) stressed that the approach of ecological economics should include some points: a) evolutionary paradigm - which incorporates uncertainties, surprises, learning, multiple equilibria, and thermodynamic constraints; b) scale and hierarchy - or how hierarchical levels interact with each other, related to the question of scaling complex, regional, ecological and economic systems; and c) nature and limits of predictability - there may be limits to the predictability of natural phenomenon at particular resolutions and we should access rules of how data and model predictability change with resolution.

Bergh & Straaten (1994) compared economic systems through history concerning their relation to the environment and to their degradation capacity. Hunting, agriculture and 'modern' economies are compared. In hunting/ fishing economies, the economy is viewed as stable with no technological changes and population increases; in an agricultural economy, population and technological changes occur [some like Boserup's (1981) views] and local environmental effects are noticed; in a modern economy, there is the introduction of mineral resources with investments and residual processes.

The illustrative examples by Bergh & Straaten (1994) are useful to locate the neo-traditional⁴ populations of *caiçaras* and *caboclos* as agricultural economies (small-scale agriculture), where slight changes in technology and population may cause local degradation, but with strong links to modern economies. The agriculture-modern systems linkage is what define the *caiçaras*, and especially the *caboclos*, neotraditional populations as part of a global system.

The definitions of sustainability discussed above are far from being exhaustive. Actually, the problem of sustainability is to define the mechanisms to accomplish it. For example, global information, reforms of government and institutions, information on how to address sociological, political and ethical factors; on how we manage systems; on how to preserve genetical, ecological and indigenous knowledge; on how to equitably limit world population, among others (FOLKE *et al.*, 1994). Recently, Daily and Erhlich (1996) addressed the relation between sustainability and equity at different scales: they took into consideration food production and gender inequity, distribution of land among farmers, between urban and rural populations, and between nations.

Sustainability for *caiçaras* and *caboclos* means a local managed system with institutional (local, regional and global) supports. Extractive reserves⁵ are a fair example: they are commonly managed areas (*res communes*), they have legal and governmental support, and local behaviors are analyzed in terms of ecological sound practices.

CONCLUSIONS

The association of ecology, in particular of human ecology, with ecological economics, gives rise to other possibilities of approaching management and sustainability, using concepts such as livelihood, scale, resilience, natural capital, and

common management, among others. National environmental policies are influenced by international and global variables, and by local Amazonian *caboclo* populations. Local influences are exemplified by Extractive Reserves, an example of common management. A less communicative or more isolated behavior is observed among the *caiçaras* of the Atlantic Forest coast: their systems of resource use and dispute resolution seldom go beyond family-community levels. On the other hand, *caboclos* interact at various scales with institutions, and have formed a variety of alliances, from other native populations (Forest People) to international institutions. A central question remains: how can *caiçaras* interact at higher scales? Initiatives that avoid patronizing from institutions (State, Universities) but include local decisions and participation are exemplified by *caboclo* experiences.

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TABLES

Table 1. The local diet of caiçaras, illustrating their dependence on local resources, especially on fish.

Locality [Southeast Atlantic Forest Coast]	Percent of local fish in diet	Reference
Ponta da Almada	60	Hanazaki <i>et al.</i> (1996)
Gamboá*	68	Begossi (1995a)
Jaguanum*	65	Begossi (1995b)
Puruba Beach	52	Begossi (1995b)
Búzios Island	68	Begossi and Richerson (1993)

Table 2. Scale of resource distribution, of ownership and of management (based on Begossi, 1996b).

Resources	Scale of ownership	Management
Specific, defined patch	Individual, family	Local rules, kinship
Forest, bay, lake	Community, Village	Local, Common management: Extractive Reserve

NOTES

1. Ecosystem or environmental services are the result of the structure and function of ecosystems. They include maintenance of air quality, climate, hydrological cycle, recycling of nutrients, pollination, and maintenance of a genetic pool, among others (BERKES & FOLKE, 1994).
2. In a common property, communal property, or community-based management systems (*res communes*) individuals have claims on collective goods as members of groups. In these regimes, resources are managed by rules for user-group and their continual use depends on other group members. Other regimes are open-access (*res nullius*, or free-for-all) and state property (*res publica*) (BERKES & FARVAR, 1989; GIBBS and BROMLEY, 1989).
3. As defined by Berkes & Folke (1992), natural capital includes non-renewable, renewable resources, and environmental services. Human made capital is generated through economic activity and technology (economist definition of capital). Cultural capital refers to factors that provide human societies with means and adaptations to deal with the environment and to modify it.
4. Neo-traditional systems are defined as including elements from traditional and newly emergent systems (BERKES & FOLKE, 1994). They include, besides the traditional knowledge, new variants and knowledge that comes from outside the population. For this approach on *caiçaras* and *caboclos*, see Begossi (1998).
5. The term extractive reserve is originally related to the extraction of rubber and nuts. Recent developments and practices show that extractive reserves must include a variety of other economic activities, such as small-scale agriculture, handicrafts and local market for medicinal plants, among others (Begossi, *et al*, in press).

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** Alpina Begossi is researcher at Nepam, teaching at the Graduate Group in Ecology at USP, Unicamp and at the University of Amazonas. She has been publishing articles in human ecology and ethnobiology, specially on food ecology, fisheries, ethnoichthyology and ethnobotany in journals such as: *Bulletin of Marine Science*; *Economic Botany*; *Environment, Development and Sustainability*; *Fisheries Research*; *Human Ecology*; *Human Ecology Review*; *Journal of Ethnobiology* e *Journal of Human Ecology*, among others. E-mail: alpina@nepam.unicamp.br

LÚCIA DA COSTA FERREIRA

Conflitos sociais contemporâneos: considerações sobre o ambientalismo brasileiro

Este ensaio se utiliza do instrumental analítico da teoria da ação sobre movimentos sociais e conflitos sociais contemporâneos, bem como de reflexões sobre ONGs, para esboçar um modelo explicativo que dê conta de aspectos relevantes do ambientalismo contemporâneo. Parte-se da hipótese de que a crise que afeta lideranças e militantes ambientalistas é provocada pela sua dificuldade de, por um lado, constituir-se como um único ator social portador de um projeto cultural de sociedade e, por outro, de desempenhar o duplo papel de ator social e agente político. A partir daí, propõe-se compreender a mudança provocada pela ação das ONGs ambientalistas em sua dimensão cotidiana. As ONGs desempenham papel predominante no profundo processo de aprendizado social que mobiliza categorias muito variadas de sujeitos e, também, no estabelecimento definitivo de um campo especificamente ambiental. Além do debate teórico nacional e internacional sobre o tema, essas considerações também se baseiam em observação direta do cotidiano de ambientalistas desde a CNUMAD-92.

Palavras-chave: conflitos sociais, ambientalismo, organizações não governamentais.

Contemporary Social Conflicts: Considerations on the Brazilian Environmentalism

This article makes use of the analytical tools of the Theory of Action regarding social movements and contemporary social conflicts, as well as reflections about NGOs, in order to outline a suitable explanatory model to understand relevant aspects of the contemporary environmentalism. The initial hypothesis is that the crisis experienced by leaders and militants is caused by a two-side difficulty: on one hand, its constitution as a unique social actor with a cultural project of society and, on the other hand, its double performance as a social actor and a political agent. From then on, our purpose is to understand the change caused by the social action of the environmental NGOs in its everyday dimension. The NGOs have an outstanding role in the deep process of social learning that mobilizes very different categories of social actors, as well as, in the final establishment of an environmental field. Besides the national and international theoretical debate on the subject, this article is also based on the direct observation of the environmentalists everyday action since the CNUMAD-92.

Keywords: social conflicts, environmentalism, non governmental organizations.

ALPINA BEGOSSI

Caiçaras, Caboclos e Recursos Naturais: regras e padrões de escala

Uma questão importante da sustentabilidade de populações locais ou nativas se refere à interação com as instituições locais e globais. Podemos esperar que populações que demonstrem capacidade de interagir de forma econômica e política com as instituições apresentem também uma chance maior de continuidade cultural e ecológica, assim como de seus sistemas de troca e subsistência. O nível da interação ecológica e social

das populações locais, seguindo conceitos da ecologia, ocorrem sob escalas diferentes: por exemplo, dos territórios individuais de pescadores da Mata Atlântica às organizações de comunidades em Reservas Extrativistas, na Amazônia. A escala organizacional (individual/familiar/comunitária) pode influenciar a capacidade de lidar com as instituições. Esse estudo analisa como populações nativas brasileiras, especialmente os caiçaras da Mata Atlântica e os caboclos da Amazônia, tem interagido, com relação às demandas ambientais, com as instituições regionais, nacionais e globais. Conceitos como manejo comum, capital natural, resiliência e sustentabilidade são úteis para entender esses casos ilustrativos.

Palavras-chave: população local, capital natural, sustentabilidade.

Caiçaras, caboclos and natural resources: scale and rule patterns

One important question concerning the sustainability of local or native populations refers to their interaction with local and global institutions. We should expect that populations with capacity to interact economically and politically with institutions, might show a better chance for their ecological and cultural continuity, as well as for their system of trade and subsistence. The level of ecological and social interaction of local populations, following concepts from ecology, occurs on different scales: for example, from the territories of individual fishermen on the Atlantic Forest coast to organizations of community Extractive Reserves in the Amazon. The scale of organization (individual/family/community) may influence the capacity to deal with institutions. This study analyses how Brazilian native populations, especially caiçaras of the Atlantic Forest coast, and caboclos from the Amazon, have interacted with regional, national and global institutions, concerning environmental demands. Concepts such as common management, natural capital, resilience and sustainability are useful to understand these illustrative cases.

Keywords: local population, natural capital, sustainability.

NILCE PANZUTTI

Impureza e perigo para os povos da floresta

Este artigo, discute as associações que são feitas entre: concepções de abjeção de uma determinada sociedade e a diferenciação dos sexos; estados fisiológicos da mulher e a natureza; os estados de transição e poder. Para isto recorre a dois autores que abordaram os complexos de **panema e reima** em duas sociedades de floresta. O exercício de análise aqui contido aponta para o caráter simbólico e sua eficácia no estabelecimento de limites, fronteiras, hierarquias e controle social. Traz para o primeiro plano a leitura crítica desses fenômenos e significados, observando contradições sociais e divisões presentes nos interditos culturais que indicam a posição ocupada pela mulher na hierarquia social.

Palavras-chave: gênero, natureza, cultura e controle social