The Global Environment as Life-worlds: On the Meanings of Sustainable Development

Ambiente global como mundos-da-vida: sentidos do desenvolvimento sustentável

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ABSTRACT

The environmental political arena was once dominated by two opposing forces. On the one hand, environmentalists demanded unconditional conservation of the environment; and on the other, developmentalists promoted economic development by exploiting the environment. The normalization of the concept of sustainable development at the end of the 1980s opened a new policy space in this arena, in which expert policy-makers began to emphasize the importance of *natural resource management*. Yet, this emphasis on *management* has not sufficiently taken account of social and cultural meanings attached to the environment, generating policy contestations furthermore. This article argues that the current contestations stem from the persisting assumption that the environment as a set of *natural resources* to be managed is detachable from human activities. Two examples illustrate this argument: the first example shows the emergence of social development concerns in the Amazon; and the second example shows intensifying cultural politics of whaling. Both instances demonstrate that the assumption of the environment at stake (rainforest and whale) to be managed relies on a clear conceptual division between nature and society concerning the environment, whereas this division has been continuously blurred in the process of political negotiations over time. Drawing on the phenomenology and some aspects of science studies, this article proposes to discard the nature-society division and consider the environment as a re-assemblage of human and non-human elements embedded within the involved actors' life-worlds.

Key-words: environment; life-worlds; nature-society.

RESUMO

A arena da política ambiental foi dominada, em seus primórdios, por duas forças opostas. Por um lado, ambientalistas exigiam conservação incondicional do meio ambiente, e por outro lado, desenvolvimentistas promoviam o desenvolvimento econômico por meio da exploração dos recursos naturais. O surgimento e aceitação do conceito de desenvolvimento sustentável, no final da década de 1980, abriu um novo espaço político nesta arena, pois os decisores políticos e peritos começaram a enfatizar a importância de *gestão dos recursos naturais*. No entanto, essa ênfase na *gestão* não foi suficientemente bem formulada e eficaz, gerando mais controvérsias ainda. Este artigo argumenta que a atual controvérsia deriva do pressuposto persistente de que o ambiente, como um conjunto de recursos naturais a ser gerido, é destacável

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das atividades humanas. Os casos examinados neste artigo demonstram a hipótese de que os ambientes em questão (floresta e baleias) a serem geridos invocam uma divisão conceptual clara entre natureza e sociedade. Referindo-se aos distintos sentidos sobre o desenvolvimento sustentável, o presente artigo se propõe a desfazer a divisão natureza-sociedade e considerar o ambiente como um novo cenário de elementos humanos e não humanos, incorporados nos *mundos-da-vida* dos atores.

Palavras-chave: meio ambiente; mundos-da-vida; natureza-sociedade.

Introduction

For decades, environmentalists who demanded the unconditional conservation of the environment and deve-lopmentalists who wished to promote industrialization by exploiting the environment had shaped an antagonistic rela-tionship. Undercurrent to this antagonism was the conceptu-al dichotomization between the global environment and the national economic development (DESOMBRE, 2007) and, in order to overcome the antagonism, the growing global environmental concerns needed to be integrated into each nation-state's policy framework (FRANK *et al.*, 2000). To this end, international organizations introduced the concept of sustainable development in the late 1980s. In normalizing this concept, the expert policy-makers strived to econo-mically rationalize the environment, and *natural resource management* became central to support this rationalization. The managerialism prompted scientists to take a significant part in the environmental policy process (ADAMS, 1990) and the environmental activism (YEARLY, 1992), as they claimed authority to legitimize ecological rationality of the management plans.

The managerialism, however, started to generate issues that were neither cleanly defined by the economic nor ecological rationality, especially in developing and non-Western countries. The issues were mostly concerned with pending social development and cultural rights in relation to the particular environment, mainly addressed by civic and social movements that had not previously been specialized in environmental activism (RUSCHEINSKY, 2004). Conventional actors in environmental politics such as the state then also crafted new discourses to claim cultural traditions of non-economically and ecologically rational uses of its environment. These new actors' involvement and formations of new discourses continuously opened *a series of [policy] spaces, each with its own characteristics* in the ongoing international environmental policy process (McGEE, 2004, p.18).

This article argues that, whereas these new policy spaces imply the demand for radical reframing of the way that the environment is politically defined, existing management frameworks still struggle with the persis-tence of the previous environmentalist-developmentalist antagonism. This is a dilemma of sustainable development and natural resource management, which aim to promote local engagement without clarifying who manage the en-vironment as *what*. For example, one of the conventional definitions of natural resource management suggests that it is *where the interaction of humans and nature involves a broad set of strategies and technologies for a wide variety of natural resources* (FRENCHIONE, 1999, p.2). While acknowledging the diverse interaction patterns of humans and nature, it does not specify what kind of meanings have been attached to the *natural resources* by *humans* as they interact with *nature*. Consequently, it fails to attend to the social and cultural problems addressed in each of the new policy spaces opened during the very process of promoting natural resource management.

Scholars have not sufficiently discussed this dilemma, presumably because the existing analytical framework relies heavily on the *nature-society dichotomy* (LATOUR, 2004) that underpins the economic and ecological rationality. The nature-society dichotomy sets up a view that the environ-ment is detached from the lived experience of people, and tacitly privileges the *global ontology of detachment* over *the local ontology of engagement* (INGOLD, 2000, p. 216). Both the social and cultural concerns are the manifestation of such local ontology, based on the experience of people who are surrounded by or closely interact with the envi-ronment (INGOLD, 2000, p. 216). The local ontology may allow the multiple interpretations of the environment (such as a living place, dietary cultural representation, spiritual symbol etc.) in contrast to the global ontology that defines the environment simply as a set of *natural resources*.

This article uses two examples of the environmental political arena in order to show how the local ontology

emerges and starts to demonstrate the dilemma of sustainable development. The policy interventions in the Brazilian Amazon elucidate that the ambiguous definition of the *Amazon* in national and international policy processes have caused a wide range of actors to interpret the Amazon and its *rainforest* differently. The *management* of the *rainforest*, thus, started to evoke manifestations of necessities of people who are surrounded by it. In this case, the environmental management needs to be socially-oriented and the rainforest needs to be defined as a part of the complex societies that already exist in the Amazon.

The politics of whaling, on the other hand, shows how different symbolizations of whales by a large number of international political players have made the rationality of *management* politically insignificant. Instead, the whaling entered the domains of cultural and identity politics. If any *management* is to be promoted, then, whales have to be politically re-identified as natural resources and meanings of whaling need to be clarified. Both examples show that, during many years of negotiations, the environmental policy processes start to show the *emic* realities of natural resource management, and they raise a fundamental question about the validity of the nature-society dichotomy. The article proposes to explore this question by referring to phenomenology and some aspects of science studies that examine the flexible assemblies of human and non-human elements as constitutive for the *environment*.

Below, the article opens with a review of the concept of sustainable development and identifies the theoretical issues to overcome the limitation posed by the concept. It then moves on to the two examples. The conclusion again raises the wider theoretical and policy concerns.

Normalizing Sustainable Development

The concept of sustainable development is rooted in the international *wave of environmental politics* emerged in 1972 when the United Nations held the Conference on Human Environment in Stockholm, Sweden (HAJER, 1997[1995], p. 24). The renowned international non--governmental environmentalist organizations such as Greenpeace became highly visible at this time. Throughout the 1970s, the environmentalists unleashed a series of campaigns against the developmentalists who were considered to be responsible for the industrialization-based economic development that had caused pollution and the destruction of ecosystems.

During the 1980s, the environmental activism evoked some developmentalist backlash, as seen in massive modernization projects and the governmental provocation against international environmental campaigns in the Brazilian Amazon. The Brazilian policy-makers were eager to claim that the globalizing environmentalism was the threat to the national sovereignty and the state's will to develop its territory (HOCHSTETLER; KECK, 2007, p. 145)[1]. Likewise, the Indonesian government promoted the New Order economic development, countering environmental campaigns which became active in denouncing Japanese timber companies in the 1970s (TSING, 2005, p. 16-17). In some cases, however, the environmentalists seemed to have made progress, as we could see in the mid-1980s when the powerful anti-whaling campaigns led to a ban on commercial whaling. Yet, this implementation eventually resulted in the prolonged political battle between anti-whaling nations that sought to strengthen the ban and pro-whaling nations that tried to lift it. In sum, the environmentalist and developmentalist antagonism worldwide intensified in the international environmental politics in the 1980s.

In order to break down this antagonism, international organizations led by the United Nations started to seek a concept to reconcile the conservation ideal to the ongoing economic development. The United Nations' General Assembly assigned this task to the World Commission on Environment and Development (WCED), and the Commission published *Our Common Future* in 1987 that officially introduced *sustainable development* as the awaited concept[2]. In the same year, the United Nations created the Environmental Program (UNEP), and the World Wildlife Fund was founded as one of the largest non-governmental conservationist organizations. These organizations began to pave ways to firmly embed the concept of sustainable development in the international policy language (LÉLÉ, 1991).

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[1] The well-known military government's slogan *Integrar para não entregar* summarizes this sentiment.
[2] The concept of sustainable development was first introduced by the International Union for Conservation of Nature (IUCN)'s *World Conservation Strategy* in 1980.

According to WCED, the world urgently needed sustainable development because *many of the development paths of the industrialized nations were clearly unsustainable* (WCED, 1987, p. xii), and emerging developing nations should not have followed the same paths. This meant that the ongoing international development framework had to be changed in order to persuade the developing nations to find alternative ways to pursue its economic development, which would take the environmental sustainability into account. Consequently, the international development community, especially the World Bank, started to propose a range of *green conditionalities* to invest money in infrastructure and financially support development projects in developing countries (GOLDMAN, 2006). Scientists started to play significant roles in this process, as they monitored the state of the environment and addressed what needed to be done in relation to the state of the international development. The *ecological managerialism* established by the Western scientists in former European colonies (especially in Africa) became increasingly accepted in development planning in this context.

The international normalization of sustainable development and managerialism fit well into the prevailing neo-liberalism and its *enterprise culture* that promoted economic and business managerialism (MIDGLEY, 2003). This tacit integration of the ecological managerialism to the economic managerialism provoked a series of critical scholarly reactions. For example, Escobar (1995, p. 192-3) argued that the concept and practice of sustainable development created *global ecocracy* based on the Western rationality and turned nature and people in the Third World merely a part of the resources to be protected. In the same vein, Gudynas (1993) criticized the sustainable development as the Western *ecomessianism* that promoted the reductionist and oversimplified view of the environment and people in developing countries. They rightly pointed out that the concept of sustainable development and the managerialism tended to disregard existing social problems, historic inequality, and power struggles that had been taking place with reference to particular environments.

Despite these criticisms, however, sustainability continued to be the main conceptual foundation of the *envi-*

ronmental mobilization in international politics throughout the 1990s (BUTTEL, 1996). This political mobilization became highly visible in the United Nations Conference on Environment and Development (the Rio Summit) in 1992. The Summit aimed to set up concrete programs for key actors such as governments, non-governmental organizations (NGOs), private business communities, advocacy groups and civic and social movements to promote environmental sustainability in their activities. NGOs were increasingly influential in the Summit, as they positioned themselves in this new international political arena as environmental watchdogs. They also claimed to be closer to *people* than the state or business communities and thus more adequate to support '*bottom-up*' local patterns of sustainable development (ELLIOTT, 1999[1994]). In this vein, they vigorously promoted *community-based* environmental projects, often building on the self-reflexive advocacy activism (LI, 2002).

The community-based natural resource management was popularized worldwide in the late 1990s[3]. It significantly opened a policy space in which scientists and activists urged policy-makers to recognize customary norms of environmental management by the *indigenous* or *traditional* users, in such a way as to generate local engagement with sustainable development. In this popularization process, *people* became divided into those who had been adapted to ecosystems and those who disrupted them. The adapting people were typically the indigenous people, granted with special cultural rights to *traditionally* use the environment; and those who disrupted the ecosystems were portrayed as *modern*, equipped with non-traditional technologies. This division thus reignited the smoldering antagonism between the environmentalists and developmentalists and naturally evoked protests from the *modern* resource exploiters. In order to contain these modern actors, *innovativeness* of the technology and management plans became the keyword (FAIRHEAD; LEACH, 2003), especially among scientists and development experts who began to promote such ideas as environmental services[4] and eco-tourism.

In the 2000s, both the *traditional* and the *innovative* experiences of natural resource management all over the world seem to indicate that, when the ideal of sustainability is put into practice, it has to embrace every sector of

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[3] There is an extensive literature on community-based natural resource management. See Watts and Peet (2004:3-47) for a comprehensive overview.
[4] See Hall (2008) for a recent review of environmental services.

development such as health, sanitation, education, income generation, rural development, environmental conservation and creation of social service provisions (THE WORLD BANK, 2002). As a result, sustainable development practically *means nothing* (*THE ECONOMIST,* 29 August 2002). This situation reflects the fact that *[t]he global cultural norm of sustainability has quite different meanings and interpretations in different contexts around the world* (MOL, 2001, p. 25), especially in developing regions where the ecological managerialism is an imported colonial idea and its economic rationality and the scientific legitimization of *environmental problems* do not easily convince the public sentiments in their cultural contexts. As a group of anthropologists asserts, we are witnessing the need for *cultural brokers* who may be able to effectively use the concept of multiculturalism in the environmental political arena and to mediate the diverse meanings attached to sustainable development (HAENN; CASAGRANDE, 2007, p. 99).

The Environment as Life-worlds

In sum, putting the concept of sustainable development into practice has triggered a wide range of local responses, and the current framework of natural resource management so far has failed to promote *management* of these varied responses. This situation makes us rethink the nature of *environmentalism* that has politicized the environment and underpinned the normalization of sustainable development in the first place. According to Ingold (2000, p. 209), environmentalism generates a view that the environment is a detached entity with reference to a *globe*. The concept of sustainable development was elaborated based on this conceptual detachment of the environment. Then, its implementation started to empirically provoke the re-definition of the environment as *the ambience of our dwelling* (INGOLD, 2000, p. 209), which is naturally diverse across the world. This empirical provocation needs to be analytically incorporated so that sustainable development could still generate the sense of *engagement*.

In order to do so, first, the *environment* should be re-conceptualized as surrounding *us* and offering a set of possibilities for action rather than as nature to be protected or natural resources to be managed (INGOLD, 2000). Among sociologists, anthropologists, and philosophers, it has been long debated that the human action is inherently creative (JOAS, 1996) and, in this vein, the environment also needs to be understood as what enables the creative action[5]. In this line of thinking, the environment naturally represents different elements to those who are supposed to manage it. Thus, it is not very precise to problematize that *sustainability has quite different meanings and interpretations* as Mol suggests above. We first need to understand that the environment has quite different meanings and interpretations and then consider how the concept of sustainable development can take account of or promote *management* of these different meanings and interpretations.

To this end, the concept of life-world becomes useful. The concept is central to phenomenology, and it consists of the individual actors' discourses, actions, and organizing practices (SCHUTZ, 1970). By using this concept, a particular environment as an *ambience of our dwelling* can be understood as life-worlds of those who interact with the environment. For the analyst, the life-world represents the *emic realities* of policy processes, reflecting the multiplicity of interpretations of the environment, in contrast to the normative, *etic* analytical framework (COHEN; COMAROFF, 1976, p. 87). These *realities* indicate the *biographically determined situations* that reflect individuals' lived experiences (SCHUTZ, 1970, p. 73), which become visible in actual policy interventions. The visibility may unite those who are in the similar biographical situations at one point of the interventions and lead them to shape a collective. As they collectively start to negotiate with the ongoing interventions, new policy spaces start to emerge. This process can be also generated by individual nations that share the similar political discourse of experience. The globally induced practice of sustainable development has resulted in a wider range of local and national responses because of the continuous openings of these policy spaces during the negotiations.

This means that the *emic* realities are actually never detached from the *etic* analytical framework. The exposure to and the interaction with the sustainable development

[5] While it goes beyond the scope of this article, it should be acknowledged that there is a wide range of debate on this definition of the environment, especially influenced by Gibson (1979)'s theory of affordances. See also Ingold (2000), chapter 14.

interventions make the involved actors appropriate the interventions within the life-worlds. The appropriation influences each actor's *stock of knowledge* (SCHUTZ, 1970), and the regenerated knowledge further re-articulates the way that development is pursued collectively and how the *environment* is defined. In this vein, the environment consists also of the history of interventions and is a product of the collective negotiations between various actors, including environmentalists, developmentalists, scientists and politicians. This means that the future sustainable development and natural resource management need to problematize the very experiences of defining the particular environment as a set of *natural resources*.

How do we analytically incorporate the process of appropriation and the etic definition of the environment into our emic understanding of the environment as life-worlds? In order to tackle the question, we now briefly turn to some aspects of science studies.

Reassembling human and non-human elements

Originally, what made the environmentalism detach the environment from life-worlds had much to do with principles of science that gave certain authority to the environmentalism (LATOUR, 2004). Science is founded on the philosophical background that distinguishes realms of humans from non-humans, by clearly separating subjects from objects and society from nature, without clarifying the processes of how this distinction or separation could be possible. Critical studies on science[6] argue that, in a real world, humans and non-humans continuously influence each other and there is no clear distinction between them. The environment as life-worlds is an *assembly* of loosely associated humans and non-humans, and in it, humans are not always the ones who can control the non-humans.

For example, when deforestation proceeds in the Amazon, the deforested environment becomes places shaped in relation to the officially demarcated spaces, a collective memory of the lost forests, of house buildings, of dust, and of mud, and the sharing of these sentiments

may led to the collective socio-environmental movements (see OTSUKI, n/d). The collective movements, in turn, may attach a new meaning to the environment in order to realize the specific needs and, thus, the relationship between the interpretations of the environment (in the realm of humans) and how the environment lets people to interpret it (in the realm of non-humans) is essentially dialectic and changeable. Ingold (2000) explores this point further by asserting that people perceive the world as a primary experience and this perception does not immediately distinguish what is human and what is not. Therefore, the indeterminate relationship between our ecological self, material conditions, and the social life is already a problematic.

In this context, the environment as life-worlds consists of the changeable associations of humans and non-humans, including particular senses of places and materials, as well as collective experiences of the management itself. This means that we should first discard the presupposed division between nature and society and try to re-position the scientifically categorized elements. Latour (1993, p.11) calls this process a closing of the (first) *great divide*, which leads to the analytical re-assembling of our life-world and, thus, the environment. In order to make concrete that this closing of the nature-society divide is important for tackling the dilemma of natural resource management and the limitation of sustainable development, we now need to consider examples that illustrate how this re-assemblage of humans and non-humans could be useful to reframe the so-called *environmental problems*.

Below, two examples are shown. The presentation of the examples will follow similar patterns. First, each example shows the initial national definition of the environment and how this was in conflict with the global discourse of nature conservation. Second, it discusses how the introduction of sustainability started to change this picture of conflict, mainly by defining the symbolized environment as natural resources to be rationally managed. It then explores how this assumption of the rationality of management has opened social and cultural policy spaces that manifest different meanings attached to the environment. These meanings have led to new sets of actions and re-assembling of the environment.

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[6] It is not the intention of this article to go deep into these studies, which are mainly known for the 'actor-network' theories.

What is the Amazon?

The initial antagonism

The first example concerns the contemporary history of development and environmental interventions in the Brazilian Amazon. Initially, the Amazon presented a very clear environmentalist-developmentalist antagonism. In 1953, the Brazilian government the first federal agency dedicated to initiate the Amazon's economic development[7] and seven years later the government officially opened the Belém--Brasília Highway (BR-010), the first road to penetrate the Amazon. The Highway connected the newly inaugurated national capital Brasília to the Amazon's largest city, Belém in Pará, which had developed as the centre of fluvial trade since the colonial era led by Portuguese. With this opening of the Highway, the Amazon became a part of the political and economic processes generated by the national capital and principal cities in the southeast. The Region's dense primary forest was no longer isolated from these processes.

By the 1970s, the Amazon had been fully politicized as a territory to be integrated and developed as a part of the nation-state Brazil. In particular, between 1964 and 1985, the military regime intensified the implementation of national integration programs[8], and new municipalities were demarcated in this integration process. At the same time, large ranchers and private entrepreneurs from the developed south of Brazil were invited to settle in the Amazon to facilitate the rapid regional economic development.

The governmental definition of the Amazon as a national territory to be developed was instantly in conflict with the wave of international environmental politics that surged in the 1970s. For conservationists, the Amazon had long been symbolized as a unique ecosystem and a source of genetic resources and biodiversity, and its rainforest was thought to be a solution to global climate change. Against this globalized environmental concerns, the military government vigorously used the national sovereignty discourse to proceed in the integration programs. This means that the international pressure initially worked to fuel the elaboration of a geopolitical discourse, which warned the possible *internacionalização* of the Amazon and justified the need to duly *nationalize* the Amazon (PETIT, 2003).

In the 1980s, the global media extensively covered *the drama* of deforestation in the Brazilian Amazon *with pictures of huge palls of smoke* and stories of *seemingly clear villains* (i.e. large cattle ranchers, logging companies, governments and international donors such as the World Bank) and *tragic victims* (i.e. small fruit and nut collectors, environmental activists and symbolized *martyrs* like Chico Mendes) (HURRELL, 1991, p. 197). Indeed, Chico Mendes played a large role in mobilizing the international environmental campaigns against the Amazon deforestation, as he reached to ask the United States Congress and the World Bank to support the rubber tapper movements aiming to protect forest reserve from encroaching cattle ranchers in the state of Acre. *Our Common Future* featured his story as an example of environmental struggles in developing regions. As he was murdered in 1988 by a cattle rancher, the Amazon's drama quickly obtained public attention both in and out of Brazil. As a result, a large number of activists, scientists and experts were mobilized, and they seriously began to negotiate ways to normalize the concept of sustainable development and establish environmental justice in the Region (see HOCHSTETLER; KECK, 2007, p. 167-185 for details of the new environmental organizing in the Amazon at the end of the 1980s).

Sustaining the Amazon

The national developmentalist discourses made the stark contrast with the international symbolization of the Amazon as a rainforest that needed to be protected for humanity. By the beginning of the 1990s, it seemed to be undeniable that the Amazon had to be one of *our global commons* both for the international and Brazilian public, and thus it had to be protected through direct international interventions if necessary. As Goodman and Hall state:

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[7] It was called the Superintendency for the Economic Valorization Plan of the Amazon (SPVEA), which was re-organized as the Superintendency of Development for the Amazon (SUDAM) in 1966.

[8] The federal programmes included: the Amazon Operation Programme (*Operação Amazônia* 1966), which transformed SPVEA to Superintendency for the Development of the Amazon (SUDAM); the National Programme for Integration (PIN 1970); the Transamazon Highway (inaugurated in 1972); the Polamazonia (*Programa de Pólos Agropecuários e Agromineais da Amazônia* 1974); the Plan for the Development of the Amazon (PDA I 1972-1975, PDA II 1975-1979); and the Grande Carajás Programme (1980); the National Plan for Agrarian Reform (PNRA 1985-1989).

The 1990s will be decisive for Amazonia. Before the dawning of the third millennium, planners and policy-makers must decide whether the world's largest remaining area of tropical rainforest will follow much of Africa and South-East Asia down the path of irreversible destruction, or whether the resources of this vast region will be harnessed for the benefit of Brazilian society and the world as a whole. (GOODMAN; HALL, 1990, p. 1)

At the Rio Summit in 1992, G7 countries and the Brazilian government agreed to establish the Pilot Program to Protect the Brazilian Tropical Forests (PPG7) to financially support the intervention and promote sustainable development. Drawing on the ongoing pro-poor international development, they linked the issues of poverty alleviation to the forest conservation (KOLK, 1996), and the PPG7 aimed to promote income generation and job creation through the sustainable uses of the forest. Consequently, *sustainable business* was presented as an innovative intervention approach as a basis to identify and support local entrepreneurship (THE MINISTRY OF ENVIRONMENT; PPG7, 2002). Through the PPG7 and other international funding, the international and Brazilian NGOs[9] carried out community-based natural resource management projects that aimed to promote sustainable, often small-scale, local businesses (KOLK, 1996).

Its implementation, however, has generated new concerns for the ownership of the natural resources and social development of the involved actors. These concerns have led to the fundamental question about what the *Amazon* actually represented. The various actors started to participate in these projects, and they started to claim rights to access the environment, now defined as a set of natural resources. The intensifying claiming to the environment reflected the ambiguous presentation of *the Amazon*. As the phrase quoted above such as *the 1990s will be decisive for Amazonia* shows, the new actors struggle to specify what exactly *Amazonia* means for the *Brazilian society* (does it include the *Amazonian society*, too?) and if this meaning coincides with that for *the world*. It is also not very clear whether *Amazonia* actually includes the Amazonian people, both traditional and modern. Moreover, if the Amazonian people are included, what does exactly the *decisiveness* of

the 1990s mean to these people in the continuity of their life? In sum, although it is obvious that the Amazon is never only *the world's largest remaining area of tropical rainforest*, what it can represent has not been sufficiently explored. As a result, the *Amazonia* continues to be largely mythologized (COMISIÓN AMAZÓNICA DE DESARROLLO Y MEDIO AMBIENTE, 1993), and the ordinary people of the Amazon (more than 20 million in 2009) keep facing practical problems of ownership, income distribution, and institutional arrangements of social benefits when participating in the resource management projects.

Re-assembling the Amazon

In 2001, the leftist government took power in Brazil and it increasingly became supportive of the ongoing *socio-environmentalism* that had surged in the Amazon after the death of Chico Mendes. The so-called *home grown* socio-environmental movements (HOCHSTETLER; KECK, 2007, p.109) emphasized social justice and livelihood security for the *chronic* poor (KITAMURA, 1994). They worked to reinsert the state authority to promote social development within the framework of the ongoing sustainable development and, to some extent, this process opened new policy spaces in which issues such as accesses to resources, infrastructure, and work security were clearly addressed.

The international environmentalism, however, has tended to neglect the importance of these movements, and the neglect often worked to regenerate the discourse of *internacionalisação* of the Amazon. For example, in June 2003, when activists from Greenpeace campaigned to stop illegal logging in a ship named *Amazon Guardian*, angry sawmill owners and employees blocked the port of Belém to prevent the activists from landing. At the same time, an association representing local loggers and timber traders put up signboards all over the city, which read: *Amazônia é nossa!* As this incident shows, the question of *who owns the Amazon?* (BARRETO *et al.*, 2008) has become ubiquitous in the environmental policy debates, leading further to the fundamental questions of properties, differently understood and claimed by various collective entities.

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[9] In the mid-1980s, there were approximately 2,000 NGOs in Brazil. The number dramatically increased to 25,000 by 1995 (*FOLHA DE SÃO PAULO,* 3 November, 2004).

At this point, we need to recognize that *resources* for the *modern* population of the Amazon do not only indicate natural resources but also include security and sense of entitlement that legal employment and autonomous economic activities should be able to guarantee. Conceptually, the modern Amazonians (NUGENT; HARRIS, 2004) do not live in the *Amazon rainforest* but live in the particular municipality, the settlement, or the neighborhood, participating in social activities through church, local organizations, and other associations, which have certain historical continuities. This means that the Amazon environment is composed of social elements, as well as material ones. The *management*, therefore, needs to specifically deal with the assemblage of these components. The actors may *exploit* or *destroy* forests and its biodiversity in order to make the ordinary life possible. By the same token, they may be engaged in the *management* if the environment politically and practically represents their social and material life.

This means that the environmentalism needs to shift the focus from *saving* the rainforest to supporting the social and political environment in which the people would come to want to actively take part in the environmental mobilization. To this end, we should rather try to re-assemble the Amazon, with its concrete elements, than strive to sustain the Amazon as an ambiguous entity.

Cultural Politics of Whaling

What is whaling?[10]

The second example follows the trajectory of the political arena of whaling, which has been sharply divided into pro-whaling and anti-whaling camps. The whale became a symbol of endangered wildlife that needed to be urgently protected for humanity in the similar context to the symbolization of the Amazon rainforest. What made the demand for the whale conservation different from the rainforest conservation was that it could not be applied to a particular country or a region. It required an international mechanism for negotiations at the outset. The environmentalists

and whalers thus agreed to use the existing International Whaling Commission (IWC) to negotiate their interests[11].

The origin of the IWC dates back to the 1940s. Between the seventeenth and nineteenth centuries, whales represented one of the most significant global commodities. They were the source of oil and countries such as the Netherlands, the Soviet Union, and the United States hunted whales in the most intensive fashion (DOLIN, 2007). Japan, Iceland, Norway and Chile also vigorously whaled, though they mostly consumed whale meat as food. The problem of over-whaling was noted in the beginning of the twentieth century, as the world's whale stock rapidly shrunk and the whaling nations started to discuss the implementation of quotas.

In 1946, IWC was created to negotiate the quotas. By the late 1960s, however, the economic value of the whale oil had become non-significant, and the Netherlands and the United States withdrew from whaling and joined the surging conservationist nations led by the United Kingdom and Australia in the 1970s. The significant whale meat consumers such as Japan, Iceland, and Norway continued commercial whaling, until the environmentalists participated in the 1982 IWC annual meeting to demand the suspension of commercial whaling. IWC decided to carry out the five-year *moratorium*, effectively from 1985. During this period, the scientific research was supposed to be carried out to give a full picture of stocks of different cetacean species in the world oceans. The pro-whaling nations participated in this moratorium, as they agreed to wait for the stock to recover and resume whaling in the 1990s.

In Japan, whale meat had been quite popular until Japan fully stopped the commercial whaling in 1987. The meat was usually sold in supermarkets and fish markets, just like other packed meat or fish. As beef was often more valued in Japan, whale meat was considered to be the cheap substitute to beef and the source of protein, especially during and after the Second World War. For example, it was commonly used in school meals between the 1940s and 1980s (WATANABE, 2009). After 1987, the whale meat became a luxury, as only stranded whales and whales caught in the so-called *scientific whaling* could enter the market. Meanwhile, the environmental groups intensified campaigns

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[10] Strictly, *whaling* includes hunting of cetacean species in general such as dolphins.
[11] The international mechanism for the Amazon rainforest conservation and sustainable development is called the Amazon Cooperation Treaty Organization to which all the Amazonian countries belong. However, other countries that are interested in the conservation do not belong to this Organization unlike IWC.

against any killing and consumption of whales, shaping one of the first successful, orchestrated, global environmental campaigns in history (EPSTEIN, 2008). The contestation between pro-whaling and anti-whaling nations intensified during the 1990s, as the anti-whaling nations campaigned for the permanent ban on commercial as well as scientific whaling, whereas pro-whaling nations tried to remove the ban on commercial whaling[12]. If the commercial whaling were allowed to some extent, as Japan argued, the scale of scientific whaling could be reduced.

IWC allows the scientific whaling for pro-whaling nations to catch whales for the own research purposes. Japan has been annually whaling about 1,000 whales under the several scientific whaling programs[13]. The Japanese Institute of Cetacean Research is in charge of the scientific whaling, as it claims that certain numbers of whales need to be annually killed, in order to understand the whale behavior. According to the research, the Institute says, it turns that whales consume a great amount of fish and threaten the fishery industry and, therefore, certain number of whales needs to be *culled* to protect the off-shore fishery stocks[14]. For anti-whaling campaigners, this is an excuse to commercialize the whale meat, as they do not see any significant linking of whaling to the fishery problem. The scientific whaling is, therefore, considered to be a significant loophole in the IWC ruling (CHASEK *et al*., 2006). As one European anti-whaling delegate to the IWC is quoted as saying: *We think that any research should focus on the management of whale stocks, not fisheries,[…] Toward that end, there's no good reason to learn the amount of prey being eaten [by killing whales* (quoted in NORMILE, 2000, p. 2264). Focusing on the management, then, Norway and Iceland used their own scientific evidence to justify the recovering whale stocks and calculate the annual quota to resume commercial whaling in the mid-1990s. The pro-whaling nations claim that whales should not be treated differently from other commercial marine resources but should be considered within the fishery context and, in this logic, the whalers are able to work when the stock recovers[15]. On the other hand, the powerful anti-whaling camp started to por-

tray any association of whale with fishery industry as *evil* and *inhumane* by symbolizing the *super-whale* that needs to be unconditionally protected (KALLAND, 1993, p. 5).

Birth of the super-whale

As pro-whaling nations sought ways to resume their commercial whaling by using the fishery logic, the anti-whaling campaigners started to portray whaling activities as morally irrelevant because whales are *extraordinary and intelligent endangered mammals that need to be saved* (EPSTEIN, 2008), which cannot be equaled to other marine resources. Kalland (1993) calls this symbolization as birth of the *super-whale*, the mystified animal close to humans, which has large brains and lives in closely united families. As the symbol of the super-whale has differentiated whales from other marine resources, the *management* logic also became irrelevant. In this process, animal rights activists started to become active in the debate.

Using this symbol, anti-whaling groups, led by the radical environmental activist organizations such as Greenpeace and Sea Shepard Conservation Society, virtually declared *war* against whaling activities (HELLER, 2007) and started to physically attack whaling ships, or forcefully impede activities of indigenous groups trying to resume the whaling rituals (VAN GINKEL, 2007). This radicalism was largely tolerated by the moderate conservation societies and the anti-whaling governments of the UK and Australia. Being against whaling started to represent the *green legitimacy*, and this was tacitly agreed among the countries sharing the same anti-whaling discourses (KALLAND, 1993). In this political context, the plausibility of the scientific research on stock management was no longer seriously debated at the IWC meetings, although scientists had elaborated the so-called *Revised Management Procedure* that was said to be *the most sophisticated ever devised for any marine exploitation* (KALLAND, 1993, p. 3). The scientific committee of IWC suggested that the whaling moratorium could be lifted if pro-whaling nations strictly follow this

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[12] We could observe this situation was very recently in the annual meeting of the International Whaling Commission which took place in Portugal, 22-25 June 2009.
[13] One research program called JARPA allows Japan to catch 340 minkes, 50 Bryde's, 100 sei and 10 sperm whales in 2009 (IWC website: http://www.iwcoffice.org/conservation/permits.htm, accessed 20 June 2009).
[14] See http://www.icrwhale.org/Pamphlets-2.htm, accessed 20 June 2009.
[15] As a Japanese diplomat is quoted as saying in Normile (2000, p. 2264).

Procedure. Nevertheless, IWC never voted to accept this scientific recommendation and lift the moratorium due to the heavy pressures from the anti-whaling groups.

Pro-whaling nations did not press hard to promote the management procedure either, since the commercial whaling within the proposed quota would not be anyway profitable and thus did not make economic sense. As the World Wildlife Fund and Whale and Dolphin Conservation Society recently declared, the whaling was no longer *economically viable* and the continuous killing of whales by Japan, Norway and Iceland would only hurt the growing whale-watching industry[16]. Then, pro-whaling nations have started to insist that the economic profitability was never a priority for the whaling. Their insistence to continue whaling without an economic and ecological rationale to do so was seen as the *anti-anti-whaling* diplomacy (EPSTEIN, 2008, p.226). In order to justify the need to whale, the pro-whaling nations began to use the language of *culture*, and this has opened a new policy space of cultural rights and identity.

Redefining whaling

In the IWC context, the so-called *whale culture* has been only recognized in the framework of *aboriginal subsistence whaling*. The IWC ruling allows indigenous groups in Denmark, Canada, the United States and Russia to hunt a strictly limited amount of whales every year, as far as these groups are able to show the *evidence of the cultural and subsistence needs*[17]. Even at the height of anti-whaling campaigns in the 1990s, which worked to keep imposing the ban on commercial whaling, the subsistence whaling was always approved by the anti-whaling nations. This approval was backed by the global indigenous movements surged since the 1980s, and the subsistence whaling was considered to be the indigenous rights to preserve the cultural heritage. As for the indigenous tribes in the tropical forests, environmentalists defined the traditional whalers to be naturally sustainable.

In 2002, IWC annual meeting was held in the City of Shimonoseki, one of the oldest whaling centers of Japan and, at this meeting, Japan fiercely contested the aboriginal subsistence whaling. At the meeting, Japan applied for the quota for the own *subsistence whaling* and the application was rejected because Japan was considered to be too *modern* and thus *commercial*. Consequently, Japan claimed that the anti-whaling nations were applying double standards as they allowed whaling by their indigenous citizens on the one hand and prohibited whaling by the traditionally pro-whaling nations such as Japan on the other. In order to demonstrate the *traditionalness* of the Japanese whaling, the Shimonoseki City Government organized a series of events such as the Summit of Japanese Traditional Whaling Communities at the time of the meeting. The city mayor carried out the publicity campaign to introduce to the visitors the historical value of whaling in the region[18]. Since then, the cultural discourse has prevailed in Japan, as well as in Norway and Iceland. They have continuously claimed the needs to continue commercial whaling to protect the coastal whaling cultures, whalers' livelihoods, and the rich whale dietary culture.

The cultural meaning attached to whaling has made the entire whaling policy process enter *the domain of identity politics and the politics of representation* (VAN GINKEL, 2007, p.86). In this new political environment of cultural identity, *whale cultures* have been rediscovered and promoted, as the Japanese Institute of Cetacean Research recently identified 70 different traditional uses of whales in Japan[19] in order to emphasize that the Japanese whaling must be understood within a larger cultural context. At the same time, many of the old whaling cities like Shimonoseki have resumed to introduce whale meats for school meals as a part of the cultural education[20].

This emphasis on *culture* has provoked new contestations, as environmentalists both within and outside Japan doubted the *authenticity* of the *tradition* (WATANABE, 2009). For environmentalists, *culture* is something static, *as a "snapshot" version of culture at some point in time, not as a dynamic force with multiple meanings* (VAN GINKEL,

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[16] VIDAL, John. Europe to hunt more whales than Japan, figures show. *The Guardian* (19 June 2009) online: http://www.guardian.co.uk/environment/2009/jun/19/whaling-europe-japan (accessed 20 June 2009).
[17] IWC website: http://www.iwcoffice.org/conservation/aboriginal.htm.
[18] His view can be read at: http://www.whaling.jp/english/isana/no26_02.html.
[19] This includes the use of whale fin in some pieces of the traditional Japanese theatre dolls.
[20] "Let us protect whale dietary culture! (*shokubunka wo mamorou*)" *Mainishi Shinbun*, 10 November 2007, page 12.

2007, p.86). Thus, they tend to equal traditional culture to their version of the environment, which should and can be protected from the dynamic social processes. For whalers, whales and the whaling culture are to be continuously redefined because they consider the environment as a part of the collective history and social practices that keep influencing the present. In this sense, they do not pretend to *protect* the whaling culture but wish to use it to pragmatically regenerate whale politics and to maintain whaling a part of the livelihood options. Following this logic, Japan is now applying at IWC for the quota for the *traditional whaling* in the coastal regions instead of the much criticized scientific whaling.

The entrance of culture into the whale politics shows that the logic of *management* does not work when the environmental protectionism becomes legitimate and *sustainable use* of the environment cannot be economically justified. The debate is thus being directed to how the *tradition* is defined and if it is supported by the public. This means that both the anti and pro-whaling groups need to redefine the *modern-tradition* dualism associated with the act of whaling and human relations with the whales more generally. In this vein, breaking the political stalemate between the anti-whaling nations and pro-whaling nations also requires the re-assembly of components that constitute *whaling*, such as whalers' social relations, hunting tools, knowledge, ship ownerships and sailing experiences, and so on. Then, the management initiative must come from the whalers who consider whales as part of their livelihoods in their life-worlds, not only from the environmentalists who try to unconditionally keep the entire whale stocks intact. The environmentalism needs to be pragmatic in this example, as the denial of whaling has now turned to be the denial of the demand for certain cultural rights, which raises more profound political and scholarly questions.

Conclusions

It has been widely accepted that the normalization of sustainable development could overcome the antagonism between environmentalists and developmentalists and natural resource management became the practical framework to do so. This article has argued that, despite the emphasis on *engagement*, the managerialism has not explored sufficiently what a particular environment could

mean to people surrounded by, or interacting closely with, the very environment. This has led to the tacit legitimization of the view that the environment is a detachable element from people's life-worlds, which failed to support the sense of engagement. Thus, we need to first pay attention to what the particular *environment* means and who share this meaning. The Amazon and whaling examples show this dilemma of the managerialism and how new policy spaces keep opening because of this dilemma, involving new actors and generating new knowledge (cf. McGEE, 2004).

The Amazon and whales are typically treated in the literature and political discourses as endangered environments with reference to the global ecological equilibrium. Much of preceding scholarly and policy debates have been generated on the basis of how to manage them as natural entities regardless to how they have been integrated to the human life. Thus, interpretations such as the Amazon as a rainforest and different whale species as the *super-whale* become possible during the process of implementing or discussing the management plans. Theoretically, the analyses generally assume that there is a boundary between human activities in the realm of society and the environment in the natural ecosystem. The article has discussed that it is inevitable that the boundary is continuously blurred, as it is processed and redefined by the actors involved in negotiating the *management*. Clearing forests to open farms or hunting whales to commercialize the meat already alter the way forests or whales are defined as the nature, as they are transformed and consumed in different social and cultural contexts. Defining these actions simply as *destruction* is only one of many meanings attached to the alteration processes.

What we witness in the environmental policy process today is the manifestation of the real boundaries claimed by different actors. We have conceptualized this as the re-assembling of the environment. According to this conceptualization, it is predictable that the environmental politics enter the realm of social and cultural politics, and the future environmentalism needs to take this consequence into account in order to elaborate pragmatic solutions to specific environmental problems. In this context, sociologists and anthropologists can make a larger contribution to the environmental policy process than currently assumed. They continue to be marginal because they do not have the same strength of certainty and vocabulary to justify the elusive meanings attached to the environment by diverse groups

of people as significant in the policy process. Nevertheless, their expertise is to look into *the role human creativity plays in policy negotiations, which stands as a counterpoint to the predictive bent of other social and physical sciences* (HAENN; CASAGRANDE, 2007, p. 101). This insistence on uncertainty will lead to the greater documentation of the *unpredictability* itself that may later prove to be historical precedent (HAENN; CASAGRANDE, 2007, p. 101).

While this article does not have the space to discuss thoroughly, what make the human creativity possible are precisely the flexible relationships between the humans and non-humans (INGOLD, 2000) and their re-assembling

processes. Environmentalism and current natural resource management plans need to let go of the clear distinction between natural and social realms ultimately because they should appreciate the human creativity. And only through this appreciation, our engagement will be fully realized. No one, in this sense, can manage the environment in its entirety. We may, however, be able to identify problematic aspects of re-assemblage of human and non-human elements and to start thinking about how to tackle each problem in a specific policy space. For that, descriptions of examples as shown in this article are methodologically significant.

References

ADAMS, W. M. *Green development: environment and sustainability in the Third World*. London: Routledge, 1990.

BAKER, C. S.; LENTO, G. M.; CIPRINANO, C.; DALEBOUT, M. L.; PALUMBI, S. R. Scientific whaling: source of illegal products for market? *Science*, v. 290, n. 5497, p. 1695-1696, 2000.

BARRETO, P.; PINTO, A.; BRITO, B.; HAYASHI, S. *Quem é o dono da amazônia? Uma análise do recadastramento de imóveis rurais*. Belém: Imazon, 2008.

BUTTEL, F. H. Environmental and resource sociology: theoretical issues and opportunities for synthesis. *Rural Sociology*, v. 61, n. 1, p. 56-76, 1996.

CHASEK, P. S.; DOWNIE, D. L.; BROWN, J. W. *Global environmental politics*. Boulder: Westview Press, 2006.

COHEN, A. P.; COMAROFF, J. The management of meaning: on the phenomenology of political transactions. In: KAPHERER, B. (Ed.) *Transaction and meaning:* directions in the anthropology of exchange and symbolic behavior. Philadelphia: Institute for the Study of Human Issues, 1976.

COMISIÓN AMAZÓNICA DE DESARROLLO Y MEDIO AMBIENTE. *Amazonia sin mitos*. Bogota: Editorial Oveja Negra, 1993.

DESOMBRE, E. *Global environment and world politics*. London: Continuum International Publishing, 2007.

DOLIN, E. J. *Leviathan*: the history of whaling in America. New York: W. W. Norton, 2007.

ELLIOTT, J. A. *An introduction to sustainable development*. London: Routledge, 1999[1994].

EPSTEIN, C. *The power of words in international relations*: birth of an anti-whaling discourse. Cambridge: MIT Press, 2008.

ESCOBAR, A. *Encountering development*: the making and unmaking of the third world. Princeton: Princeton University Press, 1995.

FAIRHEAD, J.; LEACH, M. *Science, society, and power*: environmental knowledge and policy in West Africa and the Caribbean. Cambridge: Cambridge University Press, 2003.

FRANK, D. J.; HIRONAKA, A; SCHOFER, E. The nation-state and the natural environment over the twentieth century. *American Sociological Review*, v. 65, n. 1, p. 96-116, 2003.

FRECHIONE, J. Introduction. In: PICHÓN, F. J.; UQUILLAS, J. E.; FRECHIONE, J. (Eds.) *Traditional and modern natural resource management in Latin America*. Pittsburgh: The University of Pittsburgh Press, p. 1-18.

GIBSON, J. J. *The ecological approach to visual perception*. Boston: Houghton Mifflin Company, 1979.

GOLDMAN, M. *Imperial nature: the World Bank and struggles for social justice in the age of globalization*. New Haven: Yale University Press, 2006.

GOODMAN, D.; HALL, A. (Eds.) *The future of Amazonia*: destruction or sustainable development? London: Macmillan, 1990.

GUDYNAS, E. The fallacy of ecomessianism: observations from Latin America. In: SACHS, W. (Ed.) *Global ecology*: a new arena of political conflict. London: Zed Books, p. 170-178, 1993.

HAENN, N.; CASAGRANDE, G. Citizens, experts, and anthropologists: finding paths in environmental policy. *Human Organization*, v. 66, n. 2, p. 99-102, 2003.

HAJER, M. *The politics of environmental discourse: ecological modernization and the policy process*. Oxford: Oxford University Press, 1997[1995].

HALL, A. Paying for environmental services: the case of Brazilian Amazonia. *Journal of International Development*, v. 20, p. 965-981, 2008.

HELLER, P. *The whale warriors*: the battle at the bottom of the world to save the planet's largest mammals. New York: Free Press, 2007.

HOCHSTETLER, K.; KECK, M. *Greening Brazil*: environmental activism in state and society. Durham: Duke University Press, 2007.

HURRELL, A. The politics of Amazonian deforestation. *Journal of Latin American Studies*, v. 23, p. 197-215, 1991.

INGOLD, T. *The perception of the environment*: essays on livelihood, dwellings, and skill. London: Routledge, 2000.

JOAS, H. *The creativity of action*. Chicago: The University of Chicago Press, 1996.

KALLAND, A. Whale politics and green legitimacy: a critique of the anti-whaling campaign. *Anthropology Today*, v. 9, n. 6, p. 3-7, 1993.

KITAMURA, P. C. *A Amazônia e o desenvolvimento sustentável*. Brasília: Embrapa-SPI, 1994.

KOLK, A. *Forests in international environmental politics*: international organizations, NGOs and the Brazilian Amazon. Utrecht: International Books, 1996.

LATOUR, B. *We have never been modern*. Cambridge: Harvard University Press, 1993.

LATOUR, B. *Politics of nature*: how to bring the sciences into democracy. Cambridge: Harvard University Press, 2004.

LÉLÉ, S. M. Sustainable development: a critical review. *World Development*, v. 19, n. 6, p. 607-621, 1991.

LI, T. M. Engaging Simplifications: community-based resource management, market processes and state agendas in upland Southeast Asia. *World Development*, v. 30, n. 2, p. 265-283, 2002.

McGEE, R. Unpacking Policy: actors, knowledge and spaces. In: BROCK, K.; McGEE, R.; GAVENTA, J. (Eds.) *Unpacking policy*: knowledge, actors and spaces in poverty reduction in Uganda and Nigeria. Kampala: Fountain Publishers, 2004.

MIDGLEY, J. Social development: the intellectual heritage. *Journal of International Development*, v. 15, p. 831-844, 2003.

MOL, A. *Globalization and environmental reform: the ecological modernization of the global economy*. Cambridge: MIT Press, 2001.

NORMILE, D. Japan's Whaling program carries heavy baggage. *Science*, v. 289, n. 5488, p. 2264-2265, 2000.

NUGENT, S.; HARRIS, M. *Some other Amazonians*: perspectives on modern Amazonia. London: Institute for the Studies of the Americas, 2004.

OTSUKI, K. Co-generation of space and place: a social fields approach to deforestation in an old Amazon frontier. Unpublished paper, n/d.

PETIT, P. *Chão de promessas*: elites políticas e transformações econômicas no estado do Pará pós-1964. Belém: Editora Paka Tatu, 2003.

RUSCHEINSKY, A. (Org.) *Sustentabilidade*: uma paixão em movimento. Porto Alegre: Sulina, 2004.

SCHUTZ, A. *On Phenomenology and social relations*. Chicago: The University of Chicago Press, 1970.

TSING, A. *Friction*: an ethnography of global connection. Princeton: Princeton University Press, 2005.

VAN GINKEL, R. *Coastal cultures*: an anthropology of fishing and whaling traditions. Apeldoorn: Het Spinhuis, 2007.

WATANABE, H. *Japan's whaling*: the politics of culture in historical perspective. Melbourne: Trans Pacific Press, 2009.

WATTS, M.; PEET, R. Liberating political ecology. In: PEET, R.; WATTS, M. (Eds.) *Liberation ecologies*: environment, development, social movements. Second edition. London: Routledge, 2004.

THE WORLD BANK *World development report 2003*: sustainable development in a dynamic world. New York: Oxford University Press, 2002.

WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT. *Our common future*. Oxford: Oxford University Press, 1987.

YEARLY, S. Green ambivalence about science: legal-rational authority and the scientific legitimation of a social movement. *The British Journal of Sociology*, v. 43, n. 4, p. 511-532, 1992.