

Social and Environmental Agreement and Conflicts involved in Urban Solid Waste Management: the case of Caximba Landfill in Brazil.

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ABSTRACT

This research analyzes urban solid waste management in the region of Curitiba, Brazil. It was based on the premise of the institutional changes brought by the exhaustion of environmental limitations and the rise of urban solid waste production, factors that contribute to increase social and environmental conflicts. The hypothesis is that although there is an environmental limitation of a landfill combined with resilience, agreement and conflicts among public agents involved, it does not have disruption of institutional rules about urban solid waste management in this region. To investigate this hypothesis an empirical research was carried out with the use of a case study at Caximba Landfill. Results show that there are established relationships among the parts involved in this matter. However agreements related to management proposals does not eliminate the mainly problem identified here as the first source of urban solid waste: nowadays' standard of consumption.

Introduction

Global and environmental changes are increasingly issues in the agenda of scientific and modern politics discussions. Possibly the biggest challenge in today's society over the century, will confront these changes and / or adapt to them. Taken as example, the current global process of urbanization, which has been raised by the Organization of the United Nations (UN) and several research centers, internationally recognized as a major concern of this millennium.

Regarding the background of the urban system, authors of several national and international researches have directed their attention to the broad theme of sustainable cities, which necessarily provide for an efficient management of Municipal Solid Waste, MSW. It is known that urban processes and the management of MSW are interrelated with the environmental, economic, social, political, cultural, technological and legal, because of the indivisibility of its factors: production, trade, social and ecological.

Although the problem of MSW management does not belong only to poorer countries, as also occurs in developed regions of the planet, the issue of urban waste is a major concern of urban society and a global issue for public management for underdeveloped and developing nations.

Accordingly, it is intended that this paper will aloud to continue the discussions on the dynamic of economic, social and cultural policies, due to limited natural resources and the ecosystems carrying capacity, on which cities are built within an urban system complexity. It is known that the whole socio-productive process in large urban centers results in increased production of waste, which demands new models of governance for the treatment and reuse of urban wastes and the disposal of tailings, in a right social and green way.

According to Phillip Jr. and Aguiar (2005), urban waste, when not getting proper treatment and disposal, causes several negative impacts on the environment – in the social, health and ecology views – once it favors the proliferation of vectors and the emergence of diseases in animals and humans, as well as pollution of air, soil and natural resources.

When the urban waste is simply piled in the open, for example, the site becomes par excellence, a source of emissions of methane (CH₄) – gas resulting from decomposition of organic matter contained in MSW, especially in the household. According to Pearce (2002), this gas, when released in the atmosphere is 20 times more harmful than CO₂, increasing global warming.

For this reason Obladen (2003) considers necessary the MSW management, facing the danger that urban waste poses to the environment and public health, because of their physical, chemical and infectious diseases. Regarding the risk to public health, urban waste causes or enhances the increase in mortality or incidence of diseases. With regard to the environment, urban waste, when handled or disposed improperly not only pollute and degrade the natural resources of the environment, but extends these effects to the Earth's atmosphere and the rivers and streams, thus moving to the regions downstream.

In this context, it was hypothesized that, despite the environmental limitation of consensus and conflict at Caximba's Sanitary Landfill, there is no disruption of the institutional rules of MSW management, ie, it is not called into question the company consumption in the Metropolitan Region of Curitiba (RMC). Thus, it should be noted that the institutional rules cover the economic, environmental, technological, social, cultural, legal and political aspects. We understand also that

should have a disruption due to the reduction of urban waste production, which is generated by consumer society of RMC.

Therefore, the purpose of this paper is to analyze the environmental problems of the urban system in the MSW management aspect, looking at institutional changes due to the exhaustion of the current system and due to limitations of the environment and constant increase of solid waste production.

Under these settings, this research, based on the interdisciplinary perspective, focuses on management of solid waste in its interface with the global changes and environmental hereby identified as institutional changes. Because of these changes is urgent to assess the resulting relations of consensus and / or environmental conflicts between social agents.

It was taken the data range from 1989 to 2009, in the city of Curitiba (RMC), capital of Paraná State in Brazil, and in some counties bordering the RMC that uses the Caximba's Sanitary Landfill as local treatment and final disposal of their urban waste.

Discussions about the institutional changes that occur in the urban system was taken, consisting of several factors, including: a) the pattern of production, consumption and production of solid waste in contemporary society, and b) the changes Institutions that occur under the demand of new areas technically feasible and capable of support for treatment and final disposal of MSW.

Production and consumption standards, generation of solid urban wastes and landfill support capacity on urban ecosystems.

According to Pethig (1991), the physical environment is increasingly used by humans to meet a variety of goals in production and consumption, supported by a particular lifestyle of contemporary society. The physical environment is also used as a receiver of waste from the process of production and consumption of that society, which divided into social strata, produces quantities and qualities of differentiated waste, which together contain the potential environmental impact on nature.

For Jacobi (2000, p. 14),

the model of development that characterizes our civilization in the last two centuries leads inevitably to environmental degradation in our cities. The balance of the natural environment suffers great changes and the human being, without ceasing to be an element of the natural environment, becomes a factor of it, which increasingly depends on the functioning of most ecosystems and even conservation.

Thus, the more complex the production of goods and densities technology incorporated in the objects of desire for consumer society, the more complex will be the urban waste or tailings. It will exist materials with a lower degree of degradability to be returned to natural habitats, especially natural urban environments, where are located the towns and cities.

We cannot forget that the towns and cities are built on ecosystems with limited support capabilities. Thus, the combination of increasing MSW from both the production cycle and the post-consumption, demands of local public entities an efficient management, so that the excessive generation of urban waste does not cause pollution problems and health public and overhead carrying capacity of urban ecosystems.

Jacobi (2000) reaffirms that the social practices of the urban context are marked by continual degradation of the built environment and its greater ecosystem. Indeed, environmental problems arise from the predatory impact of urbanization on the ecosystem. For example, with respect to certain types of discharges of urban waste generated by local consumers and bystanders, nature has difficulty in entering chemicals and inorganic products in the short and medium term. Other types of synthetic goods, produced by most current technological arrangements, ecosystems are unable to degrade completely, even in the long term.

By imagining this in the near future, it seems difficult to implement the logic of the hegemonic and predominant mode of contemporary production, at least the next few decades. It will possibly keep its bases in the orbit of the production and consumption chain – that, in the understanding of Lima (2002), is permanently stimulated by the capitalist system.

In consequence, the production of MSW tends to rise and, if it happens, tends to enhance the urban environmental degradation. Often, environmental degradation found in urban environments is seen as a simple result of increased urban population combined with the process of the standard of living developing of the municipalities societies.

For this reason, we cannot disagree with Jacobi (2000, p. 14), when assessing that "the perception of the environmental issue [...] is a result not only impact the goal of actual conditions on individuals, but also how their intervening social and cultural values act in the experience of those impacts". These values of modernity, emerged or created by its societies, are made up of various ideological components that make up the logic of technical progress inherent in human progress, the philosophy of anthropocentric natural resources, the fever of consumption - which symbolizes

power, lifestyle and status for certain consumer profiles entered in more privileged social strata of society.

Godard (1991) assumes that development, in turn, evokes one of the core values assumed by modern society, a society motivated and encouraged by the commercialization of individuals desires. For this reason Morin and Kern (2002) argue that the problem of development is faced directly with the cultural and ecological problems. According to them, the very meaning of the word development contains within itself and causes underdevelopment.

In this sense, Giddens (2005) analyses that much of the debate surrounding the environment and economic development is directly related to consumption patterns in contemporary society, since the consumption results in the use, by individuals, institutions and societies, goods, environmental services, energy and natural resources. The same author acknowledges that the increasing levels of consumption in the world mean that people are living in better conditions than in the past. Thus, consumption is associated with economic development and rising living standards, so that people can afford to buy more food, clothing, personal items, cars, enjoy greater leisure time and vacations, and so on.

However it acknowledges that these same rising levels of consumption in the world, besides being extremely uneven, causing severe negative impacts on the environment, since the depletion of natural elements to their complete degradation by the waste and emissions of harmful. Thus, the patterns of consumption can cause damage to the environmental resource base and exacerbating patterns of inequality. It cannot be forgotten that this whole process, ideology and rationality are

strategically from the proposals articulated on the findings of the incessant needs and uncontrollable human desires examined by the academies.

Zion (2005) also agrees that this process has greater visibility in the organization of capitalist relations of production and consumption, especially from the eighteenth century with the advent of scientific revolutions. By modernity, even as the author means something more than the ethos of a society characterized by private ownership of production, the energy-intensive and technology, through the rationalization of life and especially the hegemonic forms of knowledge and representation of the world - natural and social - of those companies, scientific knowledge and reason.

Thus, the capitalist mode of production is supported and manipulated by the logic of modernity and its consequent science. In other words, according to Santos (2002), the logic of production and consumption is not, by itself, representative and legitimate global rationality of existing society. For the author, the promise of modern instrumental rationality, which would result in progress, was to release man from his own kingdom of needs through the use of scientific instruments of natural, social and economic resources in the world, through the combination and adaptation of scientific knowledge, production and market, generating thus processes that would create endless wealth.

These reflections allowed us to sustain that the growing waste generation is derived from the logic consumption pattern of the current corporate model, which includes the cycle of extraction of raw materials, production and post-consumption. Thus, in the words of Robinson (1998, p. 141), "garbage is just one of the ingredients resulting from the ways that occurs relationship between society and nature".

Based on the reflections of Rodrigues (1998), Lima (2002) and Angelis Neto (1999), we can consider here that contemporary society, for teaching purposes, can be divided into three categories: 1) the society of production and consumption; 2) disposable society, and 3) the society of waste. In this regard, Lee (2002) indicates that the practice of consumption is encouraged from the early eighteenth century, but acknowledges that it was from the twentieth century that this process was instrumental in appropriating the behavioral sciences and the most sophisticated techniques of persuasion and that through the media specific it became definitely in a global practice, which was to characterize the called *consumer society*.

For Lee (2020), a society of mass consumption is characterized by the voracious acquisition of the needed or superfluous products, as well as by the products from the cultural industry. For her, this phenomenon is strategically articulated in the marketing laboratories, and with the media participation, these goods become symbols of wealth, like the luxury car. This is not just a way of locomotion, but, above all, a good that provides a self-affirmation of their individual owners.

According to Angelis Neto (2007), the consumer society is characterized by solitary and selfish actions of human beings, behavior may be explained by psychology and sociology, as more and more man acts and behaves in the urban environment much as an individual. These individuals have to use compulsion to satisfy their cravings, but while this act represents the power, lifestyle, status, what makes you believe he is distinct from other individuals.

Increasingly, the goods currently produced in the categories of short-cycle products, whose raw material is still to be extracted from the environment. This good is not necessarily something just to satisfy the biological need of human beings. The extent of the subjective attributes that are currently

incorporated into marketable products is incorporated into the self-affirmation of the individual. The product is thus an extension of the individual.

Thus the product through the marketing tools and advertising is proposed to satisfy the desires abstract, influenced and intensified in the mental models of a sick society, compulsive consumption, this process is, as already placed, making the individual feel as differentiated from the others, including their own social group.

To Angelis Neto (2007), the disposable society is one that is increasingly using new types of products that will satisfy the desires of the individual. When a new model comes on the market, the previous model is now considered outdated and discarded, so exchanged for newer model, regardless of the end of its useful life. In other words, even if the current model may still be in full operation, it is replaced by the newer model. Thus, the old model is discarded, thrown away or transferred to other individuals who have the power to buy even the type considered old, outdated. It is understood still to be disposable society a society that uses disposable materials (one way), without possibility of reuse. It is made up of individuals with a lifestyle that values the law of least effort, in which the convenience is valued over the reuse of materials. This practice reinforces the elements of the lifestyle worshiped by that company.

For Lima (2002), the consumer society is also, by extension and consequence, the disposable society. Again, the welfare of individual household in a society is conceived by encouraging the consumption of new types of products, like a fever. It is a company formed by the logic of consumerism, the youngest, the up to date, therefore, potentially substitutable goods in the short term, once again, strategically planned within enterprises.

At this point, according to Schneider et al. (2004), the throwaway society is characterized by wasting of industrialized countries, whose social structures encourage the frequent renewal of consumer goods. For the authors, the problem lies not only in the renovation of properties, but because this practice strengthens, most markedly, the generation of end products that nature is unable to degrade in the short term.

This inability of the ecosystem is limited by the combination of ecological urban ecosystems, ie the resilience of final disposal sites and technological complexity, such as plastic embedded in final goods consumed, as well as toxic substances and chemicals that go beyond the limits of natural recycling. Behind this consumerism is the strength and logic of incessant production called by Rodrigues (1998) of destructive production, in which the various processes that produce substantial changes in nature have remained obscured under the guise of modernity, which has caused ecological and social problems of several orders around the world. Under this approach, we have to understand, again according to the author, that the environmental issue in urban environments must be understood as a product of social intervention on nature.

The company's waste is characterized by Angelis Neto (2007) as one composed of individuals who lack the information or when having it, disregard the evidence of the environmental crisis, the depletion of natural resources, limiting the support of urban ecosystems. These individuals become short-sighted to the evidence of environmental degradation and continue to corrupt and destroy the natural resources such as water, soil and the urban environment itself.

Thus, crises and disasters with the mix of natural and anthropogenic sources are potentiated during the twentieth century, resulted from a rational and instrumental knowledge developed over the past

three centuries, now extend to all parts of the planet's overall environmental liabilities, and showing that the social model and modern technology, indicated by science and applied by policy makers seem to be exhausted. If so, science needs to revise its instrumental rationality, not just the technology base, but especially in the corporate structure resulting from it.

It should however, remember that you cannot blame only the capitalist mode of production by global environmental liabilities, since other modes of production, such as communism and socialism, also pursued the development of distance based on environmental considerations in its fullness . The technology and production management, the latter two modes of production, failed to differentiate the modus operandi of the West, although the social and political utopias would place contrary to the capitalist mode of production. It is understood that even though consisting of different political regimes, the non-Western societies seek their wealth through the process of production and consumption, using the techniques on the capitalist mode of production.

Thus, the relationship between man and nature, characterized by the domination of resources and the destruction of the environment is held in the same way across the globe, even in societies and communities that are structured in a politically and socially difference. In the reflections of Vesentini (1992), the history of human efforts to conquer nature is also the history of subjugation of man by man.

Thus, it is understood that environmental changes are the product of the action of society on natural resources and, concomitantly, of the social relations, both modes imposed by the current production of nature, and not just issues related to nature, as emphasizes Rodrigues (1998, p. 101):

I think that environmental issues must be understood as a product of social intervention on the nature and not just as problems related to nature. The problem is visible through a variety of 'issues' - floods, flooding, air pollution

and water pollution, heat islands, cardio-respiratory disease and infectious destruction of the ozone layer, greenhouse effect and acid rain. It should be understood also as a product of global operations of society and not just a fraction of class or gender. And to understand it, it is necessary to analyze the production and consumption of and in space.

However, it is necessary to consider that the production models that are based on the infinitude of environmental goods and services still available, and production techniques that use so irrational and unbalanced natural resources are appropriated by individuals, groups, organizations and countries that together make up a society that wastes the finite natural resources within a finite planet, and individuals who do not feel part of nature. Thus, for a technology company backed by high energy consumption, expanding demand for raw materials is not always renewable, for a private anthropocentric, nature exists to serve man. In this context, Santos (2000, p. 75) states that

garbage is a characteristic component of an individualistic culture, in which the individual sees in the possessed and consumed objects the sense of their own identity, having full power for the use and destination of the things consumed temporarily. In a way of life, which the individual does not feel a participant in the nature nor maintain a living relationship with the objects of conquest, these things become ephemeral, easily disposable, of transient value.

Lima (2002, p. 75) seems to allude to this same society when describes and reflects on the consumption of the planet. In the opinion of the author, trade and consumption are the constituent elements of a historical process that changed the relations of social phenomena together with the dynamics of nature. For the author, this combination resulted in human life, throughout its existence on the planet, social, economic, cultural and psychological finally resulted in enormous impacts on the environment and on humanity itself.

Thus, consumerism seems to be the dominant ideology [...] Indeed, the practice caught voracious consumption of material goods and services, few are aware of another kind of consumption that is part of the different stages of the infinite chain of production of goods -- consumption of raw materials extracted from nature and the space environment, ie, the consumption of nature itself, the planet itself.

Also, for Rodrigues (1998), the waste society is one that effectively wastes its natural resources and energy; elements that, in the late post-consumer waste are disposed of in landfills, in rivers, seas, expanding contamination.

Thus, urban waste is a material consisting of quantities and qualities of energies that worked during the production process, in part, may be reused in the production process, generating new products and not wasting these energies. Anyway, this whole process worshiped by the dominant ideology, which ensures the longevity of the society of production and consumption-based lifestyle and environmental irrationality, it is a society of waste.

The society expands concomitantly with the growth of some parts of the world and income concentration in a few classes distributed on the globe, phenomena fully supported by technological development, which is now incorporated into the over-produced goods.

Given the above in the previous sections, we can understand that the society of production and consumption, the society of waste, is interdependent and inseparable, and often seems to be one. It is within each society working players who, together, constitute and shape the pattern of contemporary consumption, which is based on the capitalist mode of production and production methods combined.

The understanding of the phenomenon examined here is important to identify the origin of solid waste and try to demystify the idea that municipal solid waste are generated solely by the consumer in post-consumer, ie the end of the production chain or, at most, by producers which, by law, was imposed the responsibility for processing and final disposal of most hazardous waste generated by them, or even for their reuse in the production process, the latter motivated by market. On the contrary, the production of solid waste, or simply urban waste, is strongly motivated by the cultural factor, a hegemonic power and ideology, values that are worshiped by the pattern of contemporary consumption.

Thus, we can understand that the generation of urban waste is the result of a system of social, cultural, technological and scientific relations frame of certain classes of men with the rest of humanity and nature. Both combinations underpin the process of capital accumulation within the economy.

However, for Phillip Jr. and Aguiar (2005), the current consumption pattern is intrinsically dependent on the forms of natural resource extraction, processing, use and disposal of waste. These patterns are diversified and are altered due to the culture of the population, the size of the city, by economic activities, the purchasing power of individuals and families and technological resources available.

On the other hand, we cannot forget that all raw materials for the production of these goods are taken from nature and the post-consumption are discharged into the urban environment as urban waste, while not as tailings, and together degrade the local environment. The global natural

environment also becomes degraded as the raw materials are exploited around the world, through the processes of production intended for exports.

In turn, the local environment is also degraded when the goods, regardless of their origins are external or internal, after being partially consumed locally, are a category of MSW. Once thought of as municipal waste, they need treatment and final provisions are appropriate or directed to be reabsorbed in the production process, when parts of them have economic value.

Angelis Neto (1999, p. 93) strengthen the understanding that the production of waste is an unavoidable phenomenon that occurs every day and in any environment, in different quantities and compositions. He also contends that the characteristics of MSW depend on some factors such as level of family income, industrialization of food habits of the population and seasonal factors. For the first factor, the author focuses on the level of family income:

... the per capita amount of waste produced increases in proportion to family income, since higher income causes more consumption and thus more waste due to surplus or obsolete and higher incidence of packaging. In the composition of waste from the classes of higher income there is a larger amount of paper, packaging, plastics and cardboard, glass and metal and lower relative amount of organic matter.

Surveys show that in several Brazilian smaller cities, of low purchasing power, most of the urban waste consists of organic materials, such as food scraps or fruit, while in large cities with high purchasing power is quite considerable portion of urban waste consists of paper, cardboard, aluminum, glass, cans and other complex materials, which guarantee the preservation of produced foods, but in landfills can take decades to decompose.

Thus, the volume and quality of solid waste generated in urban areas is mainly derived from current consumption patterns, imposed by industrial society, which is located outside and / or within the geographical boundaries of countries and administrative boundaries of municipalities.

It is understood that this process has worsened from the mid-twentieth century, as indicated Scheneider et al. (2004), which makes it urgent to review this cultural model, which disrupts the natural flow of energy through the production of ever-increasing amounts of waste with a high degree of disposability. In addition, any project that seeks a global development model guided by the balance and sustainability of natural resources must be developed in conjunction with changing the current structure cultural, social, productive, social and technological. Also require the review of the practice of the logic of consumption needs and human subjectivities.

In an attempt to reduce the production of urban waste, means that the technologies are insufficient to address the problem, however, now understood the origins of this social phenomenon becomes clear that this resolution will not happen solely by the techniques available or those that will be developed in the near future, but above all other political and social forces of society itself, for example, the cultural change in consumption. In this context North (2006) proposed an institutional change in which the actors need to change the rules in force, so changes in the reduction of solid waste means institutional changes relating to patterns of production and consumption force.

Along the same lines and design, for Menegat and Almeida (2004, p. 49) responses to minimize environmental issues, including the global dimension, should be grounded only in technological tools, but also within each society. Authors warn that there are social and political forces at work which could contribute to the care of dominant interests in a particular social structure. This whole

process demands for institutional change at the same time maximized social and environmental conflicts.

Institutional changes and social and environmental conflicts.

It was seen in the previous section the urgency of changes in the pattern of production and consumption in contemporary society to reduce the production of solid waste, especially in large cities and regions in economic development. In this context, due to the harmful effects that the increasing production of MSW represents to society and to the environment, there is urgent need for institutional change. As Espino (2000, p. 156),

the institutional change is needed to define new rights, reduce transaction costs, mitigate information problems (opportunities) and organizational restructuring. The change process is mediated by a political process that has two faces: learning and internalization of new institutions and their operation and handling. These complex interactions determine the level of economic performance

Institutional changes, in turn, may meet resistance from the social actors, because they are costly to organizations. This resistance stimulates conflict between the actors who make up the organizations, which can generate crises, since the organizations and their rules were created previously to serve different purposes. At the same time, institutional changes can promote consensus among the dominant players when they can benefit the interests of certain groups. It is recognized that groups with the same ideals lay pipelines and strategies of collaboration for the common goal is achieved or to maintain the status quo.

Sztajn (2005) notes that institutional changes can be classified in three types: 1) endogenous, 2) exogenous and 3) combined. The endogenous changes are pressed for access to knowledge, the

implementation of laws, the new technology and by changes in consumer habits within each society, leading entrepreneurs to develop new mental models to identify opportunities that arise. The exogenous changes appear, for example, in the international environment, due to the pressure of global change, which demand a new rationality, to begin the process of globalization and the current revision of the corporate model that enforces the capitalist mode of production. The pattern of global consumption contemporary fits this condition. The changes have combined the presence of the first two institutional changes.

The need or opportunity for change into MSW management in the RMC is part of the third type of institutional change, i.e. that are domestic (due to the end Caximba's Landfill life and the Caximba growing volume of urban waste) and external, outside the control of the Municipality of Curitiba (PMC) (pressure from society for new models of urban waste management, sustainability and social justice).

To Godoy and Santos (2004, p. 3), the State, in society and in the environmental area, has a prominent role in the formulation of rules and imposing them on society. Thus, it is one of the relevant social actors of institutional change, as it stipulate and monitor in order to provide the legal basis of enforcement in different sectors of society. The authors, citing Ostrom (1986), emphasize that:

in the environmental area, it is considered a vital element in the imposition of a different pattern of behavior through regulation. The legislation is the establishment of rules that organize the processes of exploration, production or product characteristics, limits access to the well, the waste generated and requires treatment. (Emphasis added).

While recognizing the important role of MSW management, for example, the same authors posit

that behavior change depends not only on the state – which has the power to dictate laws to supervise the operations – but also legitimacy and culture, they will form the political arrangements, and particularly the speed or slowness with which the consolidated institutions are replaced by new institutions.

Institutional changes can also be derived from the advancement of mental construct of society, which, in the words of Leff (2000a), stems from the development of environmental rationality. In this same context, Knechtel (2001) teaches that the intellectual potential of environmental rationality of each individual is changed or improved through environmental education, because within the sociological perspective, the education mess with the representation of individuals and changes in many human values. It seeks the formation of citizens through awareness; search the individual consciousness as a social subject for collective engagement, leading to freedom and equality. Without education, the community lives in a fertile environment of social exclusion.

It becomes clear that the source of the potential changes is the intellectual constructs of environmental rationality of the actors. Thus, changes need to be perceived and identified as opportunities by entrepreneurs and other public and social, throughout society. This means that the convenience can be identified by all of them, depending on their mental models, technical skills, subjectivities and scientific knowledge. It is known that the first reaction of the actors and / or organizations is resistance to change, which consequently leads to conflicts. Typically, the concepts of instability, imbalance, threats or opportunities or possible political and institutional changes are implicit in situations of conflict.

Conflict, though often generate symptoms similar or even identical, can vary greatly in nature and

its causes, they are also very varied settings of the scenarios and the architecture of the motivation of the actors. To Varella Filho (1993), disagreements arise primarily when individuals or groups feel that their goals, cultures, values, beliefs and interests are threatened, have been or will be affected by malicious or decisions already taken by other individuals or groups. Conflicts have always existed and probably always will, because of differences of interests between social groups. The difference in this study is that the object of conflict is new. Implicit in it are the social and environmental issues, which are characterized in this way as environmental conflict.

To Shogren, Baik and Crocker (1991, p. 85), environmental conflicts are common. The authors say that environmental conflicts are becoming increasingly severe and frequent, due mainly to the increase in urban population, industrial development and competition for land use. The same authors also identified as the generators of environmental conflicts transfer of externalities of one agent or group of agents that cause environmental impacts to another agent or to another group of agents with lower protection. Shogren, Baik and Crocker (1991, p. 86) warn that this process could still take place between generations.

These conflicts are driven by the fact that most efforts to protect one's self from environmental problems simply transfer rather than solve them. Future generations and other jurisdictions then suffer the consequent environmental damages. Transferable environmental externalities create conflicts.

Environmental conflicts have taken on new characteristics in the face of recent regulations of the political-institutional arrangements and comprehensive sites dealing with global change and environmental changes. These changes pose new environmental and social arrangements within the limits of global and local scales, especially when the main issues are the quality of the environment and depletion of natural resources, combined with the model of society imposed on the planetary

society. In several references is signaled that it is no longer possible to separate the society and its environment, nor is it possible to separate the global from the local and vice versa, before the understanding that environmental conflicts evident in global express is in many ways on the local scale. The opposite is also true.

According to Mendonça (2004, p. 188), the term socio started being used to show that some environmental problems have a strong social connotation. The term combines the social and environmental factors on a scale not mutually exclusive, but complementary, since when it highlights the environmental issue, it becomes very difficult to separate their social consequences.

For the author,

the problems and issues focused on the environmental perspective are mainly social, with the concept of the problem is a purely human abstraction, which reinforces the idea that there is no problem in and for Nature, when placed no more readings possible for man over nature, the human way of understanding them, in some humanizing it.

Acselrad (2004) states that all objects in the environment, all social practices developed in the territories and cities, all uses and meanings of the environment, interact and connect material and socially through the waters, soil or the atmosphere. The exhaustion of the carrying capacity of landfills is one example of this process. The author says that this indissoluble character of the complex formed by the binomial society and the environment is justified by the understanding that the companies are reproduced by the socio-ecological processes. And the fact that each society worships its own interests and values related to the environment and to man results into social and environmental conflicts. Based on these premises, to Acselrad (2004, p. 26),

environmental conflicts are therefore those involving social groups with different modes of ownership, use and meaning of territory and home when at

least one of the groups has the continuity of social forms of ownership develop the kind of threatened by undesirable impacts - soil-transmitted , water, air and living systems - in the performance of the practices of other groups.

Thus, due to the divergence of the interests of local actors, the social and environmental conflicts arise from resistance to any disruption of the symbols of the agreement between the different social practices that are in the same territorial base. It is these bases - space that's a systemic connectivity between soil, water and air - which are the resources of ownership. It is still on the same basis as a social activity and productive compromises the ability of other practices to continue.

To Ribeiro (2001, p. 12), environmental problems are not confined to places, cities or areas. For him, the development model adopted by developed countries and developing countries or peripherals generated environmental impacts that overlap the boundary of the. Continues the author, saying,

they surpass the boundaries of political units without complying with the limits established by geography and history of places and of those who inhabit. It was necessary to establish rules of conduct to prevent the degradation of life. The international order is a response to this need.

Under these conditions, social and environmental conflicts, necessarily, put in opposition to social actors who advocate different ways technical, social, cultural and symbolic appropriation of the material elements of the same territory or territories related to the model for corporate law. The result is the maintenance of the powerful organizations which seek to maintain the status quo of this type of natural and human resources ownership at a global and local pace.

Thus, environmental conflicts are configured according to the nature of the interaction between social practices divided into interconnected spaces and temporality that is inherent in the reproduction of various practices, as these same models to appropriate material is organized in time cycles of maintenance. Seen in this perspective, the environmental issue is inherently conflictual, although this character is not always recognized in public debate. Thus, one can understand that environmental conflicts are based on the question of nature and its resources within the field of social conflicts.

There are several ways of resolving or reducing the social and environmental conflicts, ranging from the spread of environmental problems through booklets and manuals for use of legal instruments regulating the relationship between man, society and territories, including technologies for building consensus and collaboration. The practice of consensus and collaboration is applied in public encounters as technical strategy in order to characterize all litigation as a problem to be eliminated.

For Giddens (2005), should always examine the links between consensus and conflict in social systems. The open conflict is not always continuous, but sometimes what the two sides have in common tends to overcome their differences. In this way, the actors are creating consensus and then there is the process of collaboration, often articulated as a tactic. To Tonella (2006), environmental crises and ideological confrontations become opportunities for the necessary changes occur, rather than being hidden environmental issues through consensus-building. In democratic spaces, the differences and oppositions of ideas must be presented and discussed, thereby creating new institutions.

For Mendoza (2004), if environmental conflicts are links that show some environmental conflicts arising from social conflicts to be solved or at least minimize their environmental damage, environmental conflicts need to be addressed taking into account both the factors critical natural as the critical factors that are social. It is this process that arise from the new institutions and forms of participation of local actors in the environmental movement, where the State in certain cases, bureaucratized associations, obscuring conflicts by seeking consensus pre-built, and thus formed new institutions Unless they invent and trigger rearrangements of forces and repositioning of the actors in the arena.

In this regard, Ribeiro (2007) affirm that, in environmental issues, the state's presence is fundamental in regulating human actions to prevent further conflict them coming. Alert the author that this intervention should not only be directed to restore the ecological balance but also to eliminate or minimize social inequalities.

Environmental and social changes: consensus and conflicts at Caximba's landfill.

This section aims to answer the central issue of this research, which is to examine the MSW management in the RMC, examined in the light of institutional changes, facing the exhaustion of the current system limitations imposed by the environment and the steady increase in the production of urban waste.

Analyzing participatory interviews, it was possible to detect and states that the major social and environmental conflicts derived from changes in institutional relationships that occurred between the 15 municipalities of the users of the Landfill Caximba, given the closing down of that system.

Three areas of concerns were revealed by the interviews. The first refers to the constant and excessive volume of MSW generated by municipalities. The second refers to the future site of final disposal of solid waste generated by municipalities. The third concerns the decision-making by policy makers, on which political and administrative arrangement and management of technological treatment and final disposal of urban garbage pick.

The fact that the Caximba's landfill has its own life ended in 2008, extended politically to 2009, was made together the three questions. Through interviews, it became apparent that, in parallel with the future decision making, municipalities are faced with serious problems to be urgently addressed by them in the face of environmental constraints and legal limitations of various orders with respect to future site. It is known that Curitiba is the more interested council in this solution, for three main reasons:

- 1) Curitiba has no longer an area within its territory to receive neither its own generated urban waste nor the waste from other municipalities, as it has been done so far; so they need a new place of final disposal in another municipality in the RMC;
- 2) Curitiba is the largest waste generator in the RMC, around 60%; and
- 3) Curitiba, for being the city-center of RMC, is responsible for managing the urban system of the metropolis.

The other constraints are environmental or legal. The environmental and legal regulations are made, since most municipalities; particularly those located in the north of the RMC, consist of fragile environmental areas, because they have springs, and, by law, cannot therefore receive constructs landfills or any activity that produces wastewater. These springs produce water for the RMC, especially for Curitiba. Other limitations are identified as economic, cultural, social and political.

As much as is technically feasible areas identified for the next landfill or Residues Treatment Center (CTR), some municipalities in southern RMC, for prevention of municipal law cannot treat municipal waste from third parties. Other counties refuse to give areas of their territories for such activity because of the refusal of its inhabitants.

In addition to the apparent conflict, there are other types of conflicts, which can be listed and classified as follows:

- a) conflicts between the mode of production inducement effect on economic growth and social cost of environmental degradation on the spot;
- b) conflicts between the global technological models and the generation of waste on site;
- c) conflicts between the models and the technological global technical arrangements for the treatment and final disposal of urban waste;
- d) conflicts between the technology costs for the mitigation of global environmental problems and environmental benefits and the ability to pay of local social actors;
- e) conflicts between the construction of urban and environmental fragility of the ecosystems of the regions;
- f) conflict between the restrictions of environmental laws and installations of new industrial plants that assist in the economic development of some municipalities that are in protected areas;
- g) conflict between the generation of municipal solid waste and carrying capacity of urban ecosystems;
- h) conflict between increased purchasing power of the population of RMC and the need to generate less waste disposable in places;

- i) conflict between the restrictions of environmental laws and the selection of areas for the RMC to host the managements technological treatment.

All these conflicts are environmental issues that permeate the discussion of MSW management in the RMC, which is compounded by the difficulty in finding technically feasible areas for the installation of new sanitary or even a CTR in suburbs. Other conflicts are derived from the socio-economic process resulting from the dynamics of the RMC and the cities within it, which have resulted in increased generation of solid waste degradation difficult to environmentally limited ecosystems, such as RMC.

Conclusions

Before the goal presented to this research, it became clear that the origin of solid waste in the Metropolitan Region of Curitiba (RMC) is the pattern of consumption experienced and empowered by modern society, coupled with the culture of disposability and waste. Imagining, for the coming decades, the continued increase in consumption pattern, either by stimulating the very logic of the capitalist system, either by increasing the purchasing power of citizens, the production of MSW tends to rise, and if this happen, the tendency is to maximize the urban environmental degradation.

In this context, six problems / challenges are diagnosed: 1) as it raises the standard of living, higher volumes of urban waste is generated, 2) as it increases the purchasing power of the population, the greater volume of material defendant is more complex, hindering its degradability in the environment, 3) with increasing population density in metropolitan areas, more efficient public management are defendants, 4) Union, the federal states and municipalities need to reconcile local economic development and maintaining the quality of the urban system, so the result is a better

quality of life for citizens, 5) it is necessary that the judiciary on matters governing the ownership of urban waste and therefore all derivatives economic and lastly, 6) is necessary to strengthen public policies and resources for the realization of social practices of environmental education standing in society, to promote the critical exercise of citizenship and environmental preservation.

Another point of conflict, this time of economic origin, is the future cost of deployment and maintenance of the new treatment plant, urban waste of RMC, especially for the poorest municipalities. In this context, Curitiba need to address, among other issues, the future site of final disposal of MSW, and municipalities, it seems, place or environmental constraints have limitations, especially economic. Some questions still remain: If it is decided each one taking care of your urban waste, which will be Curitiba's scenario, especially in the short term, if the city no longer has space?

It is expected that the content of this work takes the reader to better reflect on the future of cities, and contribute to the responsible management of the urban system in the sense that they can effectively provide a better quality of life for those who choose cities to live, but also to those who choose to enjoy leisure time, rest and contemplation.

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