

CADERNOS

FGV PROJETOS

JUNE/JULY 2012 • YEAR 7 • N° 20 • ISSN 1984-4883



RIO AND THE CHALLENGES FOR A SUSTAINABLE CITY

INTERVIEW

PEDRO PAULO TEIXEIRA

TESTIMONIALS

LAUDEMAR AGUIAR

MARILENE RAMOS

MARIO MONZONI

CADERNOS

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editorial

FGV PROJETOS

Celebrating the moment that Rio de Janeiro is currently experiencing, FGV Projetos has decided to pay a tribute to the city. We have invited some of the protagonists of this subject, which motivates the main debate on the planet's environment: the United Nations Conference on Sustainable Development – Rio + 20.

The world sets its eyes upon our City as a real showcase. The current theme is of such importance that all who were chosen to participate in this issue gladly accepted our invitation, by giving interviews, written statements and original articles, exceeding all expectations and leading to a special edition.

For a long time one of our plans was to publish an edition on Rio de Janeiro, with the intention to emphasize this unparalleled moment for the City.

An unique turning point, in which the government scored against those forces contrary to public order and thus, enabled us to host important international events. This change brings out the virtues and natural beauty of the “cidade maravilhosa” in the eyes of the world. This way, because of the Conference on Sustainable Development, Rio + 20, we were able to put everything together in one edition.

In addition to the protagonists in the subject, this edition includes the participation of FGV Projetos specialists- who discuss topics such as tourism, economy, legal aspects and management from the perspective of sustainable development - providing an excellent opportunity to reflect on the major changes the City of Rio de Janeiro is undergoing, especially on the issue of sustainable development.

Enjoy!

Cesar Cunha Campos

DIRECTOR
FGV PROJETOS



interview with

**PEDRO PAULO
TEIXEIRA**

Pedro Paulo Teixeira

CHIEF SECRETARY OF STAFF OF THE CITY OF RIO DE JANEIRO

With a post-graduate degree in analysis of the economic situation from the Federal University of Rio de Janeiro (UFRJ), Pedro Paulo Teixeira has a master's degree in applied politics from Fundación Iberoamericana de Políticas Públicas Gobierno (FIIAP) – Ministry of Foreign Affairs of Spain, Madrid, in 2006; and in economics from Universidade Federal Fluminense (UFF). He was deputy mayor of Barra de Tijuca and municipal secretary of the environment for Rio de Janeiro. In 2006, he was elected State Congressman. He is currently a Federal Congressman and chief secretary of staff of the city of Rio de Janeiro.

ABSTRACT

In the context of promoting the Rio + 20, sustainability is reinforced as a strategic theme for Rio de Janeiro and exercising it brings, besides environmental benefits, enormous economic potential. In this interview, Pedro Paulo Teixeira explains what the City Hall has developed to create a more sustainable and, at the same time, attractive Rio de Janeiro for investments and for tourism. Pedro Paulo mentions important projects related to sustainability, such as the new sanitary landfill of Seropédica, shows the aims and highlights the fundamental importance of the partnership between federal, state and municipal governments. The secretary also shows concern for the required balance between economic development and the environment.

FGV PROJETOS: HOW DOES THE MUNICIPAL GOVERNMENT VIEW AND ADDRESS THE MATTER OF SUSTAINABILITY IN THIS CURRENT TIME OF TRANSFORMATION OF RIO?

PEDRO PAULO TEIXEIRA: Sustainability is a strategic issue for the Municipal Government and the city. It is not by coincidence that our work is based on strategic planning, which is the foundation on which we have built a vision for the next ten years, in the first phase, and, by reverse engineering, we work with the concrete goals and projects for a period of four years. In the first plan of 2009, which referred to the period between 2009 and 2012, we had issues such as waste, reforestation agendas, the green agenda, and decontamination as strategic goals. In the review that we have just finished, we have expanded the vision of the city to the year 2030 and built and extended the goals and projects through 2016. The issue of sustainability is still on the agenda, with even more aggressive goals, since we cannot view the environment simply as an asset of wellbeing, but we must also see it as an economic asset, an economic potentiality for the city of Rio de Janeiro, which must be explored, in addition, naturally, to making the urban habitat less aggressive to the environment. We understand that the environmental asset must be explored and handled so that it generates benefits for the city.

WHAT ARE THE MAIN CHALLENGES CONCERNING THIS ISSUE THAT ARE CURRENTLY ON THE MUNICIPAL GOVERNMENT'S AGENDA?

>> There are four major projects. I will refer to an important project associated with the matter of waste. We have entered the second phase in the city's challenge in terms of the treatment of waste. In the first phase of the government, from 2009

to 2012, we faced the issue of the final disposal of the city's 9 thousand tons of garbage, which we dumped into a semi-controlled landfill – in Gramacho –, which was a transformed dump yard. Through a concession with the new landfill in Seropédica, we built the solution: a state-of-the-art industrial waste site, equipped with all the control systems needed for the treatment of urban waste. It is the most modern waste site in Latin America, which will have an anticipated duration of 15 years and will be fully equipped for the capture of methane. So, in the matter of final waste disposal, we have managed to leave prehistoric times. We have not yet reached the same reality as the developed countries, but we have reached a reality that is possible for countries experiencing rapid development. With the closing of Gramacho, approximately 9 thousand tons of waste will be redirected to the landfill in Seropédica.

This will have considerable impact on emissions, since the end of Gramacho will represent a reduction of 8% in the city's methane emissions. Besides, from the environmental viewpoint, at the landfill in Seropédica, all the methane will be captured and used for the generation of energy. In fact, the methane captured is already producing energy, which is bought in its entirety by Reduc. The emissions of methane from the landfill in Seropédica will be fully captured – nothing will go into the environment, it will all be used to produce energy.

ARE THERE, AMONG THESE PROJECTS, BILLS OF LAW ESTABLISHING TAX INCENTIVES ALSO DIRECTED TO SUSTAINABILITY?

>> There are some laws establishing incentives from the State. However, the landfill in Seropédica, for instance, will be built without any kind of tax benefit, but exclusively with the resources of the Municipal

Government. As for the final destination of the waste, we currently have a very reasonable solution. This second phase in the waste issue encompasses the collection and selection of the waste, which, if done more appropriately, increases the recycling potential of the garbage produced in the city. By our accounts, approximately 40% of the garbage is capable of being recycled and, today, after the actions by the Municipal Government and the initiatives by the society at large, or the market itself, only 2% of the recyclable garbage is subject to selective collection. The initial goal was to achieve a percentile of 3% with the program that is currently underway with the Brazilian National Development Bank (Banco Nacional do Desenvolvimento, BNDES). What we have included in the strategic plan is a much more aggressive goal: to increase from 3.5% to 20% the volume of recyclable garbage that is properly collected, that is to say, at the very least, to separate wet garbage from dry garbage. This is an item on the agenda concerning waste.

In regards to the matter of the green area, the Municipal Government of Rio has an internationally awarded reforestation project. We are expanding the number of reforested areas in the city. Concerning the matter of the rivers, the so-called blue agenda, we have strategic, impacting projects, such as the macro-drainage of the Jacarepaguá Basin. The city of Rio de Janeiro has approximately 200 rivers and, in this region of Jacarepaguá alone, there are approximately 50, which make up a complex that has been, over time, completely polluted. Today, with the State Government's decontamination program, we are executing the first phase of this project in view of the macro-drainage of all those rivers. According to the strategic plan, this project is expected to enter the second phase, with an investment of more or less R\$ 300 million. Another project associated with decontamination and sanitation, which is extremely important and perhaps the largest now in this State, is the sanitation project of the West Side of the city ("Zona Oeste"). Last year, we executed, based on a model produced with BNDES, the

concession of the entire sanitation system of the West Side: as of Grota Funda, from Guaratiba to Santa Cruz, and from Deodoro all the way to Paciência – with the exception of Jacarepaguá, Barra da Tijuca and Recreio. We are talking about half of the territory of Rio de Janeiro and one third of the population, who, up to now, has lived virtually without sewage treatment. Only 4% of this population has any kind of sewage infrastructure, and this project that we have modeled is currently the largest sanitation concession in Brazil, and the project with the greatest social impact developed by BNDES, which means to expand the percentile of the population reached by the sewage system to 40% by 2016. This means 30% less sewage emissions into the Guanabara Bay and 70% less emissions into the Sepetiba Bay, which is currently the destination of the lagoon wastewater system in the West Side.

HAS ANY STUDY BEEN PRODUCED TO ASSESS THE IMPACTS PRODUCED BY THE INVESTMENTS THAT ARE ALREADY BEING MADE AND BY THE IMPLEMENTATION OF THESE PROJECTS?

>> Actually, several studies have been produced. The nice thing about this planning effort is that, for each of the 56 goals set in the plan, there is an indicator, which is a benchmark for the goal, and indicates where we are and where we want to go. So, this allows us to quantify, in a certain way, the result of the investment that is being made, of the public policy that is being implemented.

In regards to the impacts, if we consider the average income generated by the states today, Rio de Janeiro is already topping São Paulo, with one of the highest incomes in Brazil. Rio de Janeiro is also on its way to full employment, with an unemployment rate of 5%, which is an extraordinary result. The city's GDP is starting to grow above the country's national

“These events do not frighten us. Actually, they represent the challenge of improving the city’s infrastructure to receive its visitors better and better.”

Pedro Paulo Teixeira

average, which is a reversal of Rio's economic history, since it has always grown below the country's average. Besides, we can see the companies' return and the direct investment in the city, that is to say, the potential of public investment is being applied in Rio de Janeiro. The city's GDP is currently estimated at approximately R\$ 200 billion. The Municipal Government, with the use of its own resources, now has updated investment contracts worth R\$ 10 billion. If we add what has been leveraged with these concession projects – Seropédica, the Rio Harbor, the Transolímpica access road, the Olympic Park -, we will have nearly R\$ 10 billion more in investments. Therefore, we have public investments, with the use of the Municipal Government's own resources, plus what has been leveraged with the public-private partnerships, adding up to approximately R\$ 20 billion in contracted investments, which, if compared to the GDP, represent 10% of the GDP in public investments. I have no doubt that, if the private economy of Rio de Janeiro were to remain stagnant over the next five years on account of any problem in the Brazilian or in the world economy, Rio would have a stronger economy than the other cities, and even a stronger economy than the country's economy, due to this volume and to the anticipation of public investment.

IS THE ENVIRONMENTAL ISSUE ALSO BEING ADDRESSED WITHIN THE SCOPE OF THE PUBLIC POLICIES FOR EDUCATION? HOW DOES THE MUNICIPAL GOVERNMENT INTRODUCE THE ISSUE IN THE PUBLIC PRIMARY SCHOOLS?

>> The environmental issue has been included in the municipal schools' primary education curriculum. We have noted that this is a recurring topic in the current curricular frameworks and it is not restricted to the primary education offered by the Municipal Government of Rio. This is a new circumstance, both in public school and in private school. I am certain that my daughter's generation will be completely different. My father dumped garbage in the street, I do not, and my daughter will pick a fight with whoever does that.

HOW WILL THE MUNICIPAL GOVERNMENT

PARTICIPATE IN THE RIO + 20 WORLD CONFERENCE? WHAT IS THE IMPORTANCE OF AN EVENT OF THIS MAGNITUDE FOR THE CITY, AND HOW IS THE MUNICIPAL GOVERNMENT PREPARING FOR IT?

>> Rio's primary participation is in the role of host: the city is in the proper order to receive approximately 100 Heads of State, as well as different events held concurrently with Rio + 20, and the Municipal Government is fully dedicated to it. We have held ongoing meetings with the organization of Rio + 20, and the entire Municipal Government is completely available to ensure that the city functions properly. In addition, the Municipal Government is also working on the discussion among the cities, since there will be an event, held concurrently, which will address sustainability, successful practices, problems and solutions. Rio will present its results, what we have said about waste, reforestation, decontamination, reduction of emissions, in addition to the matter of transportation, which is critical as well. The Municipal Government made the decision to implement BRT (Bus Rapid Transit) systems. We are implementing 150 km of BRTs in the city, which use less damaging fuels, and a much more advanced component to reduce the impact on the buses' engines than those employed in the buses currently circulating in the city. So, the Municipal Government has a lot to show at these events, in which other cities are involved.

The discussion to be held with the cities is extremely important, in my opinion, and just as interesting as the discussions to be held among the Heads of State. Many of the decisions made with a nationwide reach take place in the cities. The world today is focused on the big cities. Especially in this environmental matter, the cities have been innovative and have taken the initiative, sometimes even ahead of the national authorities. So, to bring together here the representatives of 40 or 50 major cities means possibly reaching 60% of the world population.

Besides, the cities have proved to be more agile. We

can see in the legal arrangements between cities in several parts of the world a tendency toward greater responsibility. The decisions made by these global cities that will be involved in the parallel meetings are just as important, or even more so, than the decisions made by the Heads of State. In the discussions between the latter, we will see numbers and proposals for agreements, but in the cities, we will see the practical experiences: like how New York is solving its sound pollution problem, and how Madrid is handling its waste policy, and how Dubai is addressing the problem of popular housing. These will be very rich discussions.

PLEASE EXPLAIN THE INTEGRATION AMONG THE FEDERAL, STATE AND MUNICIPAL GOVERNMENTS. IS ANY SUSTAINABILITY PROJECT BEING DEVELOPED AS A RESULT OF THE PARTNERSHIP AMONG THESE THREE LEVELS OF GOVERNMENT?

>> Yes, practically all of them. A clear example is the decontamination of the Jacarepaguá complex: the macro-drainage work is being executed by the Municipal Government, with funding from the Federal Government, and it was made possible because the issue of the sanitation project of Jacarepaguá, concerning the land outfall, was solved first. There would be no use in executing the macro-drainage work if sewage emissions continued to pour. The decontamination of the undersea outfall, known as PDBJ, was executed in part with funding from the Federal Government, passed on to the State, and in part with funding from the State itself. The Federal Government helped the State and the Municipality to reach a solution for that region.

Another example is the concession project in the West Side, which is dependent on an understanding that had never existed between the Municipal Government of Rio and the water company Cedae, so that the company would agree to transfer the responsibility for the sewage treatment to the Municipal Government and continue to supply water. The Federal Savings

Bank (Caixa Econômica Federal) will most likely be the funding bank of the winning consortium, so that, this way, we can manage to raise funds for the investment. The understanding between these bodies is crucial for Rio de Janeiro, due both to the complexity of the legislation of the Brazilian Republican system, and to the complexity resulting from the fact that Rio de Janeiro was once the Brazilian capital and presents a land distribution situation that differs from other Brazilian cities.

So, we now have an excellent, unprecedented situation of cooperation among the three levels of government, which allows us to effectively execute a number of projects. The project for the revitalization of the Rio de Janeiro Harbor, for instance, would be totally inconceivable without this cooperation between the three levels of government.

THE EXPANSION OF TOURISM IN THE CITY IN PAST YEARS IS NOTICEABLE, CONSIDERING THE INCREASED CIRCULATION OF PEOPLE, VEHICLES, THE NUMBER OF GUESTS CHECKING INTO HOTELS. ARE THERE ANY OTHER SPECIFIC ACTIONS BEING TAKEN CONCERNING TOURISM?

>> More basic actions are being taken: we are going beyond the hotel lodging capacity initially proposed. Today we have more projects in view of the expansion of the capacity of the hotel system, which are licensed and underway, than the project contracted with the International Olympic Committee. But what has the Municipal Government done? In 2010, we approved a law at City Hall that allowed us to propose a number of incentives, such as the reduction of the service tax (ISS) and the renegotiation of the urban property tax (IPTU) debt, for the establishment of hotels and the acceleration of the process, which has effectively happened.

In addition to the hotels, there is also the matter of the calendar, which we must qualify to ensure the

security of the investments, either for the city as a whole, or to ensure that these investments will also be directed to the hotel system. We must mitigate the seasonality of the city's calendar of events and improve the quality level of the recreational and business events. Rio is characterized as having a great deal of recreational tourism and little business tourism. We have been investing to attract company executives and professionals to Rio. To do so, we will have to invest, for instance, in convention halls. A project is currently being licensed for the harbor for a middle-sized convention hall, with a hotel chain in its surroundings, in order to meet this demand for business tourism.

Another issue in the tourism segment is the qualification of the services. Our strategic plan includes a project for which we are selecting 20 main areas of contact with the tourist, for which we intend to qualify professionals, such as bus and taxi drivers, waiters, and municipal guards. The idea is to develop a project that provides, for instance, basic lessons of English, based on a partnership to be executed with English courses established in the city, which are prepared to offer 2- or 3-year plans for the learning of a second language. This is a project that is already being developed. In it, we will repeat the model that was adopted at the Municipal Government of Rio, which fully funds an English course for approximately 20 thousand of its workers' children, at Cultura Inglesa, Yázigi, and Wizard. We pay 90 Reais and they attend the course during a period of two years. The idea is to repeat this model for 20 careers within the service segment.

Another project that is also included in our strategic plan refers to the city's signage system. To improve the signs directed to tourists is not only to add a sign or another, but to produce a whole system of intelligent signage. We have studied the model in place in London in view of improving the existing signage on all fronts.

CONFERENCE AND OTHER EVENTS TO COME, SUCH AS THE WORLD YOUTH DAY, THE CONFEDERATIONS CUP, THE WORLD CUP OF SOCCER, AND THE OLYMPICS?

>> These events do not frighten us. Actually, they represent the challenge of improving the city's infrastructure to receive its visitors better and better. Of course the largest of these events is the Olympics, which is without a doubt a transforming event.

IS THE REDUCTION OF SLUM AREAS A STRATEGIC ISSUE?

>> The reduction of slum areas is part of the strategic plan. This involves a number of components, such as the offer of popular housing, with the Program "My Home My Life" (Minha Casa Minha Vida), the delimitation of green areas, the containment of risk areas, or the stricter inspection of new constructions, especially horizontal. That is to say, this is a work of urban education within the slums. These are all political components. We have a project called Pouso, which is a space occupied by the Secretariat of Urbanism within the communities, developed more aggressively at the UPPs. This is a space where people can learn the rules of construction, the site pattern. The goal is to, little by little, instill a culture of appropriate construction within these communities. So, we have set a super-aggressive goal to reduce the existing slum areas by approximately 5%. In this first phase, from 2009 to 2012, we managed to reduce them by 2%, which was quite a success if we recall that the slum areas in Rio de Janeiro were still growing. To stop the growth was in itself a gain and, besides, we have reduced them by 2%, which represents an even greater victory.

HOW IS THE RELATION BETWEEN THE SLUM AND SUSTAINABILITY BEING ADDRESSED?

14 ACCORDING TO ANY PROJECT, ANY LAW?

>> Within the scope of the projects, for instance, we have the Social UPP, whose breadth supplements the UPP Program of the State Government, covering the social aspects, the matter of employability, culture and the environment. In this regard, the Municipal Government goes in with programs that are already consolidated, concerning reforestation, the cleaning of the rivers by agents from the communities- the River Guardians – and environmental education in general, with teams that already handle the matter of environmental preservation within these communities, particularly the matter of garbage, which is perhaps the most shocking aspect.

SO, HAS THE CITY'S GROWTH BEEN SUSTAINABLE AND HEADED IN THE RIGHT DIRECTION TO ENSURE THE CITY'S FUTURE?

>> I am absolutely confident that it is. That is not to say that it cannot improve further, but we are on the right track. The Municipal Government and the State Government understand that this process through 2016 is as important as the post-2016 legacy. We want to show the world that it is possible to defeat the stereotype attributed to Rio in the past, of a provincial city that, in a certain way, accepted the “carioca” easygoing way of doing things, not to mention the easygoing lifestyle, which was also not very professional.

Until 2016, Rio is on schedule with the Olympics agenda, the deliveries are on time, it is capable of

planning and investing, and it is exporting public policies to the entire country. The city's management models, of both the Municipal Government and the State Government, are being copied. Our expectation is that a good public management will influence the choice of a major corporation when it chooses a location to establish. We want to help Rio de Janeiro in the process of attracting back the major corporations and the talents that were lost in the past. So, currently, we face an entirely new prospect: the students graduating from the Getulio Vargas Foundation (FGV), for instance, no longer plan to join a law firm in São Paulo, but to stay here. And those who have gone plan to return. This is a sign that Rio has found a new growth dynamic, and we must make an effort to ensure that this movement is sustainable. If we plan to be a global city, a city of the future, a happy city – I will take advantage of the concept of happiness, which I believe is the new hip concept, the coolest concept we have in terms of development today -, it is impossible not to address the environmental issue and the balance between economic development and the environment.

WHAT ROLE WILL THE MAYOR EDUARDO PAES PLAY IN RIO + 20?

>> Rio is in fashion. So, we must have in this city political leaderships capable of voicing this time of transformation of Rio de Janeiro. I have no doubt that the mayor is a central player, as both the host of the conference, and as the speaker for the good practices that are taking place in this and in other cities. He is a political leader who is fully capable of forming opinions on city solutions worldwide.

“If we plan to be a global city, a city of the future, a happy city – I will take advantage of the concept of happiness (...), it is impossible not to address the environmental issue and the balance between economic development and the environment.”

“Our expectation is that a good public management will influence the choice of a major corporation when it chooses a location to establish.”

Pedro Paulo Teixeira

An aerial photograph of Rio de Janeiro, Brazil, showing the city's skyline, mountains, and a large stadium complex. The text is overlaid on the image.

testimonial

**RIO + 20:
RIO DE JANEIRO IN THE
CENTER OF THE WORLD**

LAUDEMAR AGUIAR

Laudemar Aguiar

NATIONAL SECRETARY FOR THE RIO + 20 COMMITTEE

Graduated in Economics from the Universidade Federal do Rio de Janeiro, minister Laudemar Aguiar joined the Ministry of Foreign Affairs in the 1980s. He was minister-counselor of the embassy in Paris and is currently the National Secretary of the National Organization Committee of Rio + 20.

ABSTRACT

The Rio + 20 Conference will bring new characters to the debate on sustainability. The participation of civil society will be extremely important both to discuss themes such as the green economy, eradication of poverty, social inclusion and management of natural resources and to transform words into effective actions. In this statement, minister Laudemar Aguiar raises the main challenges found in the organization of Rio + 20 and takes into consideration the importance of the immaterial legacy of this conference that, in fact, will be the first global event on the theme. The main consequence of the occasion will be to make the population aware of sustainable development.

"Brazil aims for an ambitious text, but one that is, above all, a visionary text clearly showing that something is wrong and that we must change development, consumption and production standards to allow all countries around the world, in the next 20 years, to develop economically and promote social inclusion and environmental protection." (Ambassador Luiz Alberto Figueiredo)

The United Nations Conference on Sustainable Development (Rio + 20) is not an isolated event in the history of discussions on sustainable development or in the history of the City of Rio de Janeiro. However, the search for sustainability now involves an unprecedented dimension and urgency. More than ever we must persist: it is not only about an environmental issue – the sustainable development is set on a tripod: environmental preservation, social development and economic development.

Conferences such as the Rio + 20 are opportunities to develop medium and long-term projects. ECO 92 was a landmark, as it definitively established the concept of sustainable development. The environmental and sustainability agenda was incorporated into the governments, economic agents and civil society's agenda. Before ECO 92, Stockholm Conference took place in 1972, where for the first time environment, economic and social problems were jointly addressed. Thanks to this legacy that has been built on progressively, today we no longer discuss the need for higher sustainability, but rather how to achieve it.

Rio + 20 will be a starting point for new ways to produce and consume. From June 13 until 22, 193 UN members will renew their commitment to the sustainable development and evaluate the advances and gaps detected over the last years. Discussions will be organized to address two aspects: green economy in the context of social and sustainable development and poverty eradication; and how to organize the international discussion on sustainability more effectively.

During the Rio + 20, the civil society will discuss new topics at Sustainability Discussions (June 16-19) and make recommendations to the Heads of State and Government on how to deal with such current themes, as sustainable energy, waters, oceans, social inclusion, migrations, cities and economy.

After all, sustainability may only be achieved by means of civil society and economic agents' actions, which are increasingly involved in such discussions. For example, when comparing two different products, today's consumer chooses that which is more sustainable. By following the advice of the President of the Republic, Dilma Rousseff, we are striving to make Rio + 20 have the highest possible participation of the civil society. For this, the Government is supporting the People Summit, which gathers together NGOs and social movements, in addition to a partnership with Caixa Econômica Federal. There will also be a temporary 6,300-m² tent in Riocentro for parallel events, lectures, presentations and seminars by civil society organizations accredited by the UN. In addition to Riocentro, there will be several places spread out all over the city for civil society participation. As a result, Rio + 20 is expected to mobilize an area that is four times larger than that of ECO 92. Riocentro alone is twice as large as ECO 92.

In the organization of these spaces, we have been supported by important partners, such as BNDES, Sebrae, Vale, Petrobras, Eletrobras, Finep, Oi, Correios (Post Office), Banco do Brasil, Caixa Econômica Federal, Banco do Nordeste do Brasil and dozens of others that have provided materials

and services. It is a great mobilization by both the government and the civil society, which has included the private sector more and more. In addition, 1,000 volunteers from vulnerable communities and 700 university students enrolled in our volunteering program established in partnership with the United Nations Development Program (UNDP), with the participation of the Industries Federation of the State of Rio de Janeiro (Federação das Indústrias do Estado do Rio de Janeiro) – Firjan and Caixa Econômica Federal. The whole Brazilian society has mobilized around Rio + 20, whether by contributing to discussions or participating directly in the organization process.

Digital media and the Internet will allow the integration of events scheduled to take place in locations as far as Parque do Flamengo, Parque dos Atletas, Arena da Barra, Vivo Rio, Mauá Pier, and Quinta da Boa Vista. There will also be spaces closer to Riocentro. This means that Rio + 20 will effectively be a global conference. Anyone who may be at the Pier of climbing the Himalayas with a connected cell phone will be informed on line, with the help of a software application that is being developed with FGV Foundation, of everything that is happening in Rio. We intend to use to the extent possible the new communication Technologies and make a paper smart conference using the lowest volume of duly certified paper.

There is a series of other actions intended to mitigate or offset the environmental impacts from the event, such as the use of flexfuel or ethanol-powered buses to reduce the volume of carbon gas emission. Inside Riocentro, there will be actions ranging from the use of biofuel for generators to bioplastic bottles from Braskem, another partner, in addition to cups made of corn husk and selective waste collection. We will rely on the participation of both the Municipal Urban Cleaning Company (Companhia Municipal de Limpeza Urbana) – Comlurb and the waste pickers association.

Moreover, in addition to sustainability and connectivity, another matter of concern is accessibility. When speaking about social inclusion and participation, how could we conceive a conference and preclude, for physical reasons, disabled people from joining the event? It is necessary to show that physical and digital equipment for disabled people represents no additional cost, but rather an investment to make everybody's life easier, starting with the 40 million disabled Brazilians. That is also a matter of urban mobility, because a mother pushing a baby's pushchair will benefit from the same wheelchair user ramp. Besides, when we started to examine such actions, I came across a quite interesting fact: Rio de Janeiro has the first 10 year-old fully accessible subway system in the world.

“Any city hosting a conference of such a level must adapt itself at several levels. Some more, others less, depending on the existing structure. This is not exclusivity of Rio de Janeiro.”

Laudemar Aguiar

Another good accessibility example refers to contents: the conference transmissions will have subtitles and audio description in two languages. Our website is provided with Imag3, a system that allows the access by people with visual or hearing impairment. And we are very happy to know that the UN is going to adopt Rio + 20 as a content accessibility reference for next conferences.

The main task of the National Organization Committee is to implement the Host Agreement signed with the UN, where Brazil committed to provide all material conditions for the development of the conference in Rio. We are ready to welcome up to 150 Heads of State and 50,000 authorized individuals in Riocentro. The Conference organization not only involves the preparation of event venues, but the whole city.

In this sense, Rio has an advantage. We organize every year two of the major events in the world: New Years Eve and Carnival. Not thousands or hundreds of thousands of people, but rather millions of people attend them. Few cities in the world have managed to achieve a similar a level of security and logistic assistance for so many

people in a single event in such a short period of time. Security coordination includes the Ministry of Defense, the Eastern Military Command, and all security entities linked to all spheres of power. Today, articulation and cooperation between municipalities, state governments and the Federal Government are substantial.

This does not mean that we will be entirely free of all difficulties. Which major event is free from inconveniences? But everything is a matter of information. If you only inform at the last minute that the direction of a street has changed or that a blockage is scheduled in a particular area due to the transit of a Head of State, this will obviously be chaotic. For that, in contact with CET-Rio, the Municipal Transport Office, the State Transport Office, the Ministry of Transports, the Eastern Military Command, all security entities and the National organization Committee have established flows for the conference. There will be 350 buses allocated solely for authorized personnel, and we will reinforce and expand the urban bus lines that will transport the public to the event locations. Because of a school holiday and optional job attendance at municipal, state and federal level,

several vehicles are expected to be in the streets and therefore there will be a compensation for the increased traffic. Planning and information are critical to avoid as many inconveniences as possible.

Rio has already established itself as a leading place in the planet for the hosting major events. Rio + 20 will serve to show the city's advanced and receptiveness level, as a preview of what is going to happen with Catholic Youth (Juventudes Católicas), FIFA World Cup and the Olympics. The hotel network in Rio has increased and modernized together with restaurants and other tourism infrastructures. All of the inhabitants of Rio de Janeiro believe that Rio will be better tomorrow.

Today, Brazil is a reference for the United Nations for a country that has developed in a sustainable manner in terms of social inclusion and greater environmental awareness and protection, taking 30 million people out of poverty. The United Nations Secretary-General Ban Ki-moon and the Conference Secretary-General Sha Zukang said that it is important to make this event in Brazil, because Brazil "leads by example". In other

words, we are a reference in this debate. This complements the Brazilian history of negotiation and composition in international forums. Brazil, adds, multiplies and approximates positions. As such, we are actors in the most diverse negotiation tables.

In spite of everything that we have done with respect to infrastructure, the major Rio + 20 legacy is immaterial, and everyone should be aware of that. If we could create a higher awareness of sustainable development for us and the whole world, if we could make the people understand what that means and make their contribution to the future of the planet, all will have been worthwhile. For a moment, we must stop thinking only of physical infrastructure. Rio + 20 is not about that. It is what we are required to do with this planet from now on. It is not only an encapsulated, environmental matter. It is all of us.



testimonial

THE PROTECTION OF ENVIRONMENTAL RESOURCES IN THE STATE WHICH RECEIVES MOST INVESTMENTS

MARILENE RAMOS

Marilene Ramos

PRESIDENT OF INEA

Graduated in civil engineering and holding a doctorate in environmental engineering, both from the Federal University of Rio de Janeiro (UFRJ), she was Environmental secretary for the State of Rio de Janeiro and is currently president of the Instituto Estadual Do Ambiente (Inea - State Environmental Institute). She also works as professor of the Brazilian School of Business and Public Administration of FGV Foundation (EBAPE/FGV), where she develops research and projects in the area of sanitation, and the management of water resources and the environment.

ABSTRACT

In face of the domestic and international exposure which will host several large events the State of Rio de Janeiro was offered the opportunity to change its environment. According to the president of the State Environment Institute (Instituto Estadual do Ambiente) - Inea, Marilene Ramos, in order to achieve this, it would be necessary to make progress in matters pertaining to environmental licenses; to create sanitation conditions that would be compatible with the economic development of the State, to expand protected areas and to grow in a sustainable fashion. In order to accomplish all of these tasks, Inea has been preparing itself with the goal of becoming an environmental body to refer to, and to play a strategic role on the development agenda of the State of Rio de Janeiro.

Rio de Janeiro is going through a very unique moment. On the one hand, we have become the showcase of the world, while on the other we are facing the tremendous challenge of balancing this economic growth with sustainable development. The very creation of the State Environment Institute (Instituto Estadual do Ambiente) – Inea, already represents a large step taken by the state government to prepare itself for this task.

Once the State decided to become the recipient of large investments, it exercised - and society demanded - profound changes to the area of the environment. Then, back in 2007, under the aegis of Secretary Carlos Minc, we began working on the idea of creating Inea by merging three already existing environmental agencies: The State Environmental Engineering Foundation (Fundação Estadual de Engenharia do Meio Ambiente) – Feema, the State Rivers and Lakes Superintendence (Superintendência Estadual de Rios e Lagoas) – Serla, and the State Forests Institute (Instituto Estadual de Florestas) - (IEF). Everything that came afterwards – investments, the World Cup, Rio + 20, and the Olympic Games – all made their contribution to show that this transformation was and continues to be necessary.

Feema, for example, had a great deal of licensing liabilities – between 8 and 17 thousand lawsuits which at times would extend for four, five or more years. A large volume of investments was being directed towards all areas – petroleum, mining, metal working, infrastructure – which were not

being backed up by their corresponding investments made at the necessary speeds. As soon as I took over the office in 2008, I went to Macaé, and I had to live through one of the worst embarrassments of my life as a manager of public relations. I had to face an audience of small and medium size businessmen – oil vendors, who depended on licenses to be able to work and who showed me a chronology of their environmental licenses. There were cases when they had filed for licenses back in 2001, yet it was now 2008 and these licenses were still not granted.

At the time they were created back in the 70s, Feema, Serla and IEF represented a huge advance. Then, as time went by, these institutions got older, they did not get their human and material resources replaced. Back in 2007, when I was Serla's president, I would joke that the youngest engineer under my employ had graduated 40 years ago! Today, Inea is evolving and it is seeking to become an environmental agency to refer to in its area, capable of responding to this demand. We are (inclusively) signing a management contract in which one of the goals is to downsize and even to end our environment-related liabilities, without giving up the exactness to be employed in later analysis and inspection.

To give you an idea about this level of evolution, during its first year (2009), Inea issued 1300 environmental licenses. In 2010, there were 2300. And last year, some 3 thousand licenses were issued. The funds invested in 2007 revolved around R\$150 million. In 2011, they reached R\$450 million in investments.

Full conservation units jumped from 118 thousand hectares to 190 thousand. And basic sanitation, which catered for only 25% of the state's population, now caters for 30%. We also had to face a very serious problem to do with the quality of the air at start-up time of Companhia Siderúrgica do Atlântico (CSA), although now, in 2012, with the investment demanded by us, the air quality of our surroundings is under control. We executed a Term of Conduct Adjustment (TAC) with Refinaria de Duque de Caxias (Reduc), requiring the latter company to make investments in the control of the environment to the tune of R\$1.1 billion.

These are only some examples of improvements, although we are facing many more challenges. From an internal perspective, we need to close-the Inea structuring cycle with a new civil service examination for government positions. When the first civil service examination was held, we brought 240 technicians on board, although we lost many of them to the market, since the wages we were paying were out of sync with those of the market. As a result, we now need to hire new people. Over the coming five years, we will have to replace perhaps some 50% of our workforce, especially specialized employees. Inea inherited a personnel roster that came from Serla, from Feema and from IEF, and these employees, whose average age is around 50 years are already coming close to retirement. No intermediate roster has been prepared. Therefore we must bring qualified people on board, to train our current employees and to convey the immense knowledge that this team, who have been working for us for 30-40 years, have accrued over all this time.

In terms of the environment, the greatest challenge being faced now by the State of Rio de Janeiro is that of basic sanitation. I always say that the sanitary conditions in Rio are not compatible with its economic development. If we were a country, the State would have become a member of the Oil Producing and Exporting Countries (Organização dos Países Exportadores de Petróleo) - OPEP, or an Arab Emirate. We have the second largest GDP in Brazil, and we have the third largest per capita earnings, all the while third-world sanitary conditions are present. Morocco, for instance, has a better rating than we do. Only one out of three inhabitants in the state has his sewer treated. The waste of the remaining two-thirds gets dumped into the first river, ditch or beach that they find. The result is a polluted Guanabara Bay, polluted rivers, beaches that are unsuitable for bathing, etc. Even though this is not exactly one of Inea's attributions, our challenge is to work together with the Office of the Environment, with the concessionaires and with the different municipalities, to foment the sanitation agenda within the State, something which is absolutely essential.

With regards to garbage, we are making a revolution! Until the end of 2012, 90% of the garbage produced within the State will go to sanitary garbage dumps. Or in other words, it will be disposed of under adequate conditions. In 2007 the opposite was happening. Some 10% would go to sanitary garbage dumps, while the other 90% would go to dumps exposed to the weather, or at best, to controlled garbage dumps such as the Gramacho. Now, with the closing down of Gramacho, of Itaoca in São Gonçalo, of Babi in

Bedford Roxo and of the garbage dumps in Volta Redonda and in Barra Mansa, we were able to turn this situation around. Still, the challenges pertaining to garbage collection and recycling still remain. In most municipalities, garbage collection services are an open sore, to say the least, especially in areas that were subject to disorderly and irregular occupation.

After Inea's internal restructuring, and after the problems regarding sewers and garbage, a fourth challenge still remains: habitation. A large part of environmental problems that we have now result from the inability to meet the demands of each dwelling. Disorderly occupation, especially by lower-income groups, ends up dominating areas that should be permanently preserved, such as river banks, steep hillsides and forested areas which will lose their natural covering. As a result, I believe that one of the greatest merits of the Federal Government was the creation of My Home, My Life (*Minha Casa Minha Vida*), which was response to decades of silence towards the tremendous pressure that a lack of adequate homes exert over the environment. Nevertheless, there is still an awful lot to be done.

Another challenge that still needs to be addressed is the change in the profile of our industries. Rio de Janeiro is growing, although this growth has been attributed to a carbon-intensive industry. We need to have our industry change the standard of its carbon emissions, and to have it adopt a more sustainable stance. There is a large concentration of steel mills, along with the petroleum industry, which are highly carbon-emission intensive, which produce the greenhouse effect. We cannot call them 'dirty' industries', however, since the term applies to industries that pollute locally without treating their effluents. This is not what we are talking about. The industries that are here today, including the older ones, are adapting themselves. Companhia Siderúrgica Nacional (CSN), for instance, signed a TAC of R\$250 million with us – which should actually come closer to R\$400 million, to invest in environment controls. Licensed industries, both in Porto do Açu as well as the Rio de Janeiro Petrochemical Complex (Comperj), on top of others, follow extremely restrictive environmental

standards, which very often are stricter than those of the European Union. And, even then, they continue to set up in the State, which is a sign that they wish to produce in a clean and sustainable fashion.

This is the result of our excellent relations with private industry, from which came part of the pressure for the change that is represented by Inea. The Industries Federation of the State of Rio de Janeiro (*Federação das Indústrias do Estado do Rio de Janeiro*) - Firjan, for instance, obtained partners which helped (and which are still helping) us to consolidate. We also have the support and the advisory services of FGV Foundation - FGV, and of FGV Projetos. When it comes to private companies, the name of the game is very clear: "bring in the best technologies, and licensing that will get granted very quickly without any hindrances. Our interlocution is of a high level."

At this point in time, when Rio de Janeiro is hosting some momentous events, I see a unique opportunity for the State's environmental area, especially as a result of the Olympic Games. The environmental legacy that the Rio Proposal contemplated is extremely important, because it is helping us to move the gears that generate investments, which used to follow at a much slower pace. The process that has been started will most certainly stop after 2016, which will allow us to make the environmental jump that we need.

This environmental legacy includes actions such as the intensification of the air quality monitoring network within the metropolitan and beach areas on account of some sports contests, along with controlling car and bus pollution. The Environmental Sanitation Program carried out by the Municipalities around the Surroundings of Guanabara Bay (*Programa de Saneamento Ambiental dos Municípios do Entorno da Baía de Guanabara*) - PSAM, has been structured to accomplish our Olympic commitment to improve the quality of the Guanabara Bay water. We are called the Marvelous City because we have many incredible things. We want to make Rio's environment as wonderful as our nature.

“ I had to face an audience of small and medium level businessmen – oil vendors, who depended on licenses to be able to work and who showed me a chronology of their environmental licenses. There were cases when they had filed for licenses back in 2001, yet it was now 2008 and these licenses were still not granted. ”

“ In terms of the environment, the greatest challenge being faced now by the State of Rio de Janeiro is that of basic sanitation. (...) We have the second largest GDP in Brazil, and we have the third largest per capita earnings, all the while third-world sanitary conditions are present. ”

Marilene Ramos

testimonial

ECONOMY AND SUSTAINABILITY

MARIO MONZONI



Mauro Monzoni

COORDINATOR AT FGV

Graduated in Administration from the São Paulo School of Business Administration (EAESP/FGV Foundation), Monzoni has a master's in Economic Policy Management from Columbia University, USA, and in Public Finances also from EAESP and a doctorate in Public Administration and Government from EAESP. He is coordinator of the Center for Sustainability Studies at FGV Foundation and partner of Venturas e Aventuras Tourism.

ABSTRACT

In his testimony, Mario Monzoni alerts to the need of inserting sustainability in the public policy and private sector agendas in order to establish a new economy. In his opinion, it is necessary to create global governance for sustainability that is also participatory. In Brazil, Rio de Janeiro is featured in the foreground of this issue as it engages in the construction of soft mechanisms of exchange, stock exchange and goods for the services of carbon and other environmental services. Being so, Rio could capitalize this historical and political heritage of debate and discuss development issues in a global level, inspiring the country to pursue a new agenda of sustainability and participatory spaces.

Rio + 20 is a special moment, because we will meet once again, as a society, to discuss the courses of our development and review the set of goals defined 20 years ago within the scope of the international negotiations held. Although there is still so much to fulfill, we find that the sustainability agenda is growing substantially. The world economy still revolves around the concept “business as usual”, but, running along the sides, the issue of sustainability gains more and more relative importance, particularly, in the corporate segment. The organized society, social movements, NGOs and even the scholars have long participated in this process and alerted us of the risks we face, from the perspective of the impact on the planet’s capacity to offer us quality of life through ecosystem services, the quality of the relations among people, among communities and even countries, and that it can be much more civilized. Even though we managed to take many people out of poverty in past years, it endures. The access to basic utilities, such as water and electricity, is still a problem, but much has evolved and the corporate segment plays a very important role in this process of improvement.

Today, the demand for a global governance of this issue is huge. The United Nations’ current organization model is insufficient to deal with the global challenges of sustainability, from either the social-economic or the environmental viewpoint, so we must rethink the need for a new form of governance, within a world that is much more complex than it was 20 years ago. Presently, our

telecommunications impose a networked society and a communications link never seen before, so the conference will be held within a networking context that would have been unimaginable a while back. This means that society, in addition to demanding the authorities’ physical presence to participate in the decision-making and deliberation processes, will also experience a gigantic impact remotely. I believe that the U.N. will have to move towards permeability, in the sense of incorporating society’s demands and their participation in the decision-making process, and if the Organization does not grow more flexible, this will come in other ways. So, in regards to global governance, we must conceive participative, rather than exclusive, processes.

In addition to this governance, we must think about a development agenda. I understand that inclusive green economy carries with it a proposal and agenda: it does not discard capital as an important instrument for the allocation of investments and the injection of capital into society, but it must consider the social and environmental aspects within this process. The implementation of this agenda relies, beyond a doubt, on the United Nations entities and the organized society itself, although the greater part of the responsibility lies with the corporate segment and the public policies. In the corporate segment, we must develop according to our corporate responsibility of mitigating the impact on the ecosystems and introduce excellence into the value chain relations, but it is crucial that, within the scope of the public policies we have a set of

“Rio has been involved in the construction of soft mechanisms, of stock, commodities exchanges, for carbon servicing and other environmental services.”

Mario Monzoni

economic instruments that cause the capital and the corporate segment to allocate resources within a new, inclusive green economy.

This time of transition in which we coexist with the model of economy of the XX century, based especially on oil, might finance this new economy and, perhaps, in this case, Rio de Janeiro, the State and the Municipality both, might have a great opportunity. Rio is currently a major oil producer and this source of revenue may, intelligently, be channeled toward funding sustainability within the context of an inclusive green economy. Rio has become a forum of discussion concerning the issue of global sustainability, and it has a primary advantage to add this discussion agenda. It is my understanding that we need some sort of financial mechanism to support this new agenda, such as, for instance, the Tobin tax, which has recently been talked about again, or the tax on the oil barrel. We do need an indicators mechanism and a development monitoring tool.

What we have now are the Millennium Development Goals (MDGs), to be achieved by 2015 and we are currently discussing the appropriate monitoring tool to be used as of such time. A strong critical mass already exists for the creation of the Sustainable Development Goals (SDGs), which will replace the MDGs, and propose to encompass a greater breadth of issues, particularly the environmental issue, and should be built in a more participative manner.

Considering the national context, I believe that Rio has a great opportunity to make the “old economy” finance the “new economy”. Urban mobility is a good example in this case. People do not need a car, but rather transportation, just as people need energy, rather than oil. Oil would serve the single purpose of financing. Alaska, for example, created a sovereign fund in which part of the income from the price of oil is invested, so if the sources are depleted, that state’s population will have a long-lasting income, much like a retirement fund. This is an example of the “old economy” financing the “new economy”. Green economy should be seen as a reformist system, rather than a revolutionary system.

Rio has been involved in the construction of soft mechanisms, of stock, commodities exchanges, for

carbon servicing and other environmental services. This is an important step, as it moves in the direction of the creation of market mechanisms or economic instruments that encourage the companies to reduce their emissions of greenhouse gases, and Rio is at the forefront of this process, but unfortunately we have not yet seen this happen in other Brazilian states. As a result, Rio might capitalize on this history and on the political heritage of debating and discussing the issues of development on a global scale, and inspire the country to adopt a new agenda of sustainability and participative venues.

Particularly, after Rio + 20, I would like to see the world working toward the establishment of a participative global governance system, in which society effectively finds its space in the decision-making processes, and that we manage to build an agenda for an inclusive green economy, which has a very articulated prolonged effect on national public policy. Ultimately, that we create a participative fund to finance the efforts, based on economic instruments, such as the Climate Fund and the Amazon Fund.

It is possible to conceive global initiatives funded by unsustainable, superfluous activities, based on exaggerated consumption, which can be used in the construction of public policies that penalize the unsustainable and promote investments in sustainable technologies – an industry that is still taking its first steps and needs an initial public investment to take off.

Today, we live in the worst of worlds, in which fossil fuels are subsidized at a global level, which leaves the market forces to deal with alternative technologies. This logic must be reversed. We must move toward a set of indicators and goals that stimulate the nations to do their share in terms of biodiversity, the global climate, the reduction of poverty and inequality. In other words, this is the direction toward an ideal world, in which we ensure that the quality of the environmental services rendered today will still be available to our children and grandchildren. It is possible. There is still much to be done, but it is possible. What distinguishes us from other beings is that we have a conscience. We must direct that conscience in the right path.



article

RIO 2020

SÉRGIO BESSERMAN

Sérgio Besserman

ECONOMIST

Graduated in economics at the Catholic University of Rio de Janeiro (PUC-Rio), Sérgio Besserman Vianna was planning director of the National Bank for Economic and Social Development (BNDES). He was president of the Brazilian Institute of Geography and Statistics (IBGE) and of Instituto Pereira Passos for the city of Rio de Janeiro. He chairs the Technical Chamber of Sustainable Development and Metropolitan Governance of the city. He has been a member of the board of trustees of the World Wide Fund for Nature do Brasil (WWF-Brasil) since 1992. He is currently professor of Brazilian Economics at PUC-Rio and a commentator of Globonews and of the city on Rádio CBN.

ABSTRACT

Rio de Janeiro is preparing to host events of global expression, like the Rio + 20, the World Cup and the Olympic Games. Besides other important and necessary ventures, Sergio Besserman analyzes how philosophical and behavioral changes can represent a priceless legacy to the progress and well-being of the population. The author is optimistic about the results of Rio + 20 and suggests measures to strengthen the brand of the city that, together with its history and its impressive natural assets, may result in its taking on the role of world leader in the fostering of sustainability.

Brazil and Rio de Janeiro have benefited, before the crisis of 2008 and even after, from a good period for the economy. Both the State and city of Rio de Janeiro have been attracting investments on a scale that is above the Brazilian average. The city, in fact, will be in the limelight and on the international agenda at least until 2016. As of now in 2012, with the Rio + 20, and every following then, Rio will be the stage of a large international event.

Beyond the cyclical legacy resulting from such events – more income and employment during their promotion –, society is concerned with the structural implications, the legacy of these years. Such legacies can be classified as being related to hardware and software, respectively.

On the one hand, there is the need to maximize the economic and social return on the investments resulting from these events and, in this area, we can state, in the area of transport, the Bus Rapid Transit (BRT), the Bus Rapid System (BRS) and the expansion of the cycle network, which represent a small revolution in themselves. In the area of waste, with the closing of Gramacho (sanitary landfill) and the modern treatment center, major changes are present. Also the equipment related to the World Cup and to the Olympic Games are

appropriately certified and of a modern standard. In fact, in Rio de Janeiro the largest Basic Productive Process in Brazil is in progress – the project for the revitalization of the port. There are still many other investments, however I consider that the software itself could be the most important legacy of these years, i.e. a set of actions employed in the city that change some of the behavioral standards, leading towards excellence.

We, cariocas [people from Rio], have several qualities. Besides being friendly, we are entrepreneurs, we work hard – more than paulistas [people from São Paulo], for example, as shown in the monthly survey carried out by IBGE (Brazilian Institute of Geography and Statistics). But we have not incorporated an objective of excellence in service to our working culture. We also do not have, in this new transport system which integrates various modes, a culture of respect for the bicycle and, moreover, of respect for the rules and regulations. It is the same concept regarding waste. We have an urban cleaning company that is recognized in the world as the most efficient, but – without exaggerating – no culture of keeping the city tidy. Companhia Municipal de Limpeza Urbana (Comlurb) has to turn up and do the cleaning. I consider the most important legacy



to be the change of these intangible aspects, enabling the carioca to focus more on excellence, whether in the taxi service, the hospitality services and food services used by tourists, in the general services provided by the city itself, in the behavior concerning waste or the transport. This is surely a more structural change.

In the meantime, inequality continues to be deeply ingrained in our society and there is, in democratic Brazil, legitimate pressure on behalf of civil society for public policies and the allocation of public investments in social inclusion, prioritizing those less-favored over centuries of History. In most of the investments, this guidance is identified, in the area of transport, in the area of waste or even in other less important aspects on the agenda, such as the work of Fundação Parques e Jardins, which will inaugurate, before the Rio + 20, Parque Madureira, the third largest park in the city, just behind Parque do Flamengo and Quinta da Boa Vista. However, fighting inequality is much harder than fighting against poverty. Inequality can only be fought against through the distribution of assets. In the past, generally speaking, the attempt to redistribute assets has generated economic inefficiency, because the predominant assets were industrial plants or land. Today, in the 21st century, the main asset for generating wealth is knowledge. We can only consider these extraordinary years of Brazil and Rio de Janeiro as a benefit if, at the end of the process, we have increased the level of access for most of our population to knowledge. Naturally, this depends on improving the quality of public education, and there is a great effort being made in this direction. But it does not mean just this. It also implies in valuing knowledge and adopting, in Rio de Janeiro, an economy that is not dominated by oil, but the 'post-oil', an economy of knowledge. More than ever, we need knowledge not only to improve our social and political life, but also because this will be the economy of the future, especially in the case of Rio de Janeiro.

In the specific case of the Rio + 20, it is implicated in a historical process of gigantic proportions, that could be compared to the Renaissance, and which is the center of the agenda of the 21st century, of economic life, social life, political life, and even of human thinking. In fact, everything will have

to change. What will be its legacy? What will its position be in the midst of this historical process? Looking back at ECO 92, we can see that many things were decided then, but nothing advanced to diminish the problem. Despite the debates, the negotiations on climate change, biodiversity, desertification, what we see today is that the situation is getting worse. Even the successes in the fight against poverty were mainly down to the global economy until 2008 than to the Agenda 21 that was established at the time. However, there is a sense that ECO 92 was a success. How can this paradox be explained? At that time, the Berlin Wall had just fallen, Fukuyama was writing about the end of History, people believed that the markets were capable of self-regulation and most of economists said that the internet and the fine tuning of the central banks would prevent economic crises. The world was living a moment of optimism, of certain naivety. Seen retrospectively, it seems like easy courage, but the success of the ECO 92 is explained by facing problems of biodiversity, desertification, fight against poverty and inequality, presented by the knowledge of the time.

The Rio + 20 takes places in a completely different scenario. The world is still submerged, and will continue to be for several years, in the biggest economic crisis since 1929. Any naive belief in the inexistence of deeply rooted problems ahead has simply disappeared. So, thinking has also been shaken. There is a doubt about the capacity of global political leadership facing the economic crisis or deciding on any other matter. At the same time, the problems have got worse. Today, it is no longer a matter of appealing to the principle of preservation for future generations. Today, we know that the limits of capacity of the planet offering us indispensable services to our life and development, like climate, biodiversity, soils, freshwater, etc. are dangerously on the brink. The Rio + 20 takes place at the most difficult time and has a more mature feeling related to the meaning of History than the naive optimism of 92. It will be successful if the problems are faced with boldness, with target proposals related to sustainable development, and compatible political processes, recognizing the reality as it is. If, on the contrary, there are procrastinations, if the Green economy, more than a sustainable economy in view of the physical

limitations of the planet, is reduced to a small technological innovation here, a green glitter there, the Rio + 20 will be remembered as a conference that did not match the historical moment. I see, however, with optimism that the debate about the Rio + 20 has already changed everyone's perceptions. One year ago, sustainability could only be seen as a change of attitude and actions, and with some concern on the part of companies. Today, we face the transition from a civilization based on the consumption of fossil fuels to a low carbon economy, which respects the other limitations of the planet, as a historical problem that must be resolved.

With regard to hospitality and transport during these next events in Rio de Janeiro, I don't see any major traffic problems. A school holiday has been announced on June 20, 21 and 22, although being optional. The operating center of the City Hall is the most modern in the world, which allows more efficient monitoring of the flow. In addition, the carioca tends to collaborate when the communication is successful, as seen in the institution of reversible lanes that everyone accepts without any problem. In the case of hospitality, there is a lack of high-standard hotels, which is more urgent in the case of international events like the ones that are expected. There are two forms of resolving the problem, which are both important. Firstly, with physical investments and the construction of more five-star hotels for the World Cup and the Olympics. There is, also, a whole set of investments scheduled. The other one is to qualify, through an organization of information, registration and security, the direct contact of clients interested in renting apartments or rooms with suppliers of equipment. With a more business-oriented approach, this can be met on

several levels, from renting a room in Copacabana to a mansion for a businessman. It is a way of covering the discrepancy there will always be between the demand in the peak season and the capacity of infrastructure. There is no economic sense in maintaining a hotel infrastructure to meet peak moments.

During the following years and decades, sustainable development will occupy the business agenda and will be at the center of international politics. Humanity is facing the challenge of doing things never done before, making global decisions, thinking in a longer time frame, taking on costs related to things and services that nature provides us with, which are seen as public goods, and are not. It is a robust and long-lasting agenda. Rio de Janeiro has in its brand the issue of sustainability, not because it is a sustainable city. No city on the planet is. But due to our impressive group of natural assets. They are three large forests, whereby two of them – Pedra Branca and Floresta da Tijuca – are the largest forests in the urban perimeter of a city and one, the most preserved. Two bays, one completely polluted and the other where development is thriving. In any case, both of them are beautiful, and it is our duty to clean the Guanabara Bay. A lake system and a sea coast that, besides being spectacular, from the perspective of value, is a brand known worldwide. How many cities in the world have districts whose names are known by billions of people? Who knows the name of a district of Madrid, Sydney or Shanghai? These days, billions of people recognize the name Copacabana. It has a high value and our brand is associated to this. God has also helped us. The energy that moves the city is clean, the Brazilian energy matrix is basically hydroelectric. All of this

grants some output advantages. These natural assets are not lost in some paradise island in the Caribbean or the Indian Ocean; they can be found in the middle of a metropolitan region, with 12.5 million people – 6.3 million in the city. This is unique in the world. This is the reason why we are a candidate for the Heritage of Humanity in a special category that is just ours: urban cultural landscape.

Rio de Janeiro, in a way, expresses the challenge of sustainable development. The world, with this agenda, will be observing us and Rio has to present itself, now in the Rio + 20, in the Olympic Games and also in years to come, not as a sustainable city, which would be a lie and lies do not strengthen any brand, but as a city in substantial movement towards greater sustainability.

The path is undergoing deeper transformations through the measures that are being adopted in various sectors. In transport, seeking the use of carbon-zero fuels and electric buses that, besides not polluting, are noiseless. Fortunately, the BRTs allow this technological transition in the future. Besides the improvement of the trains of the Baixada and the encouragement of the use and change of culture regarding the use of bicycles. In waste, the closing of the Gramacho represents a great victory, but there is still much to be done, and as soon as possible, in the field of selective waste collection. In the area of energy efficiency, besides the certification of sustainability of the new public and private buildings, the retrofit of old equipment for better use of energy and water also represents new business opportunities. It is essential to increase the efficiency of the models of management in Brazil, of the Guanabara Bay, of the forests, protecting the most threatened biomes

– sandbanks and mangroves. Fortunately, society, the electorate and, consequently, the politicians have shown awareness on the theme. Besides the environmental benefits, Rio is in a win-win situation also in terms of income and employment on consecrating itself as a metropolis that is driven towards sustainability. With the history of the ECO 92, of the Rio + 20 and for having replanted a forest during the time of the empire, the city may come to be consecrated as the locus of discussion on sustainable development, a type of Davos Forum on sustainability. It is an amazing target for Rio de Janeiro and it can be achieved.

In this sense, the Olympic Games have the role of strengthening the brand of the city. In reality, this is the main return since the event does not normally generate revenue, in the final accounts. Taking this into account, it is necessary, concerning the hardware, to maximize the use of the most modern tools of design, architecture and technology in the fixed equipment of long return, to the extent that everything that is essentially focused on the event is temporary and can be used either in other parts of Brazil or for other purposes. As to the software, in a competitive environment like the large cities, how is the brand (the most decisive intangible asset) strengthened? As stated previously, it is incorporated, personally and institutionally, into a culture of excellence at work, going beyond the simple achievement of certifications, showing this, reaffirming the importance of sustainability, seeking maximum efficiency in the administration of the events. All of this is part of the essence of our brand.

The current rhythm of development of the cities is unsustainable and all of them will have to change

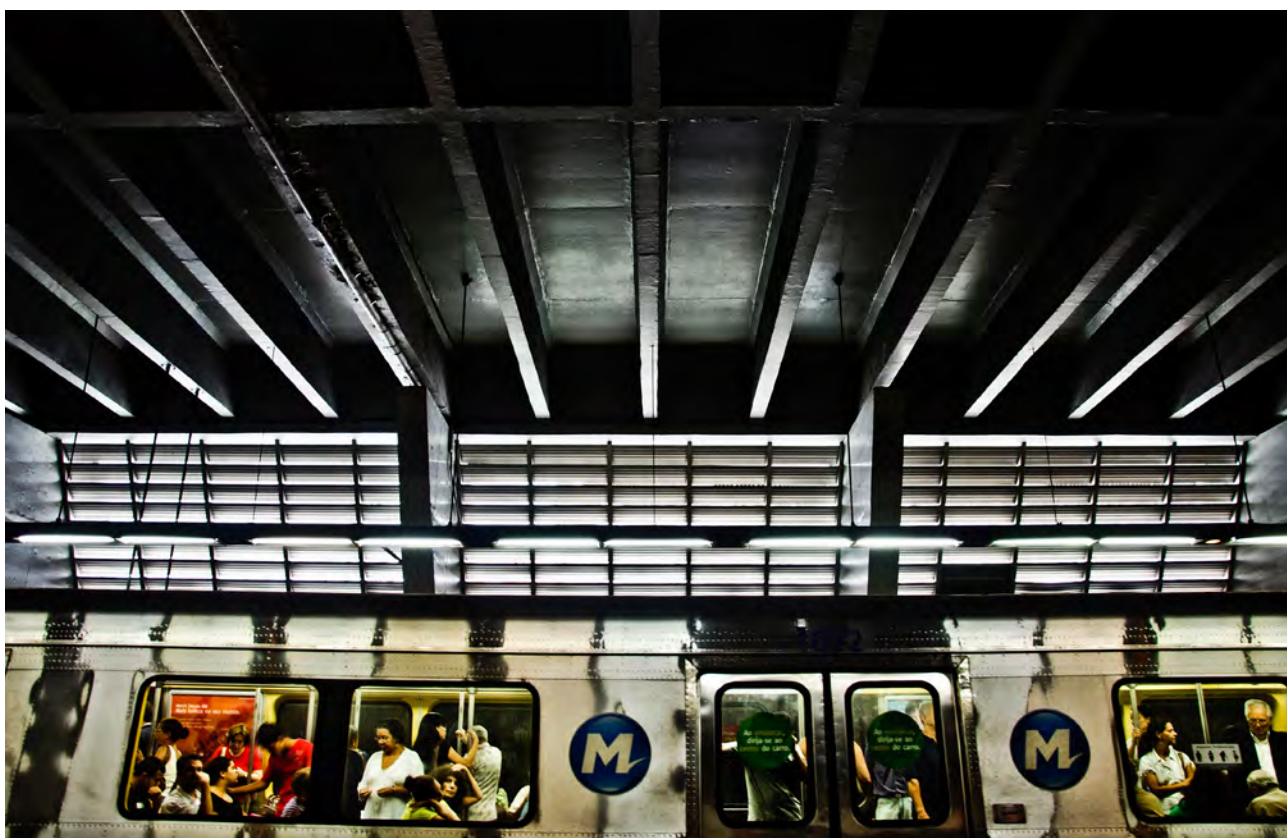
if we want to avoid the worst case scenarios of global warming. The price of everything will have to consider the cost of environmental damage and, from then on, the changes in the next two to three decades will be considerable. The idea of leaving home and going to work, for example, the idea around which the cities organize their transport system, is more or less condemned. Every time there is less need for someone to wake up, use their computer, get up, warm the planet considerably for an hour and a half, or more, to get to another place, sit once again in front of another computer to do the same things they could do at home. There is the same questioning regarding the transport of cargo. The producers send them to distribution centers, and from there to warehouses, then to the regional offices and to the supermarkets. So, people leave home and, with a trolley or basket, they take things from the shelves to fill it. This is in the age of the Internet. With this type of organization, all the cities will have to undergo major changes. Maintaining the focus on sustainability, Rio de Janeiro is in a better position to make use of the opportunities that will arise.

Sustainability is an unrelenting need, and will change the economy in the next few years. The technical name of this is a “transition towards a low-carbon economy”, in which the price of all goods will have the cost of warming the planet, of the greenhouse gas emissions involved in their manufacture. From then on, there will be a major change in the standards of consumption. It is very important for Rio de Janeiro not to bet on the past. Exploration should be made of oil, the pre-salt, making money, however considering that we do not need to use these resources. As in the case of the large events, the city has to be prepared for the period after them, which will not be fossil-based. We have to be competitive in this economy of the future. Everything suggests that the energy matrix will be another, but, in my opinion, it depends on the market, and not on scientists or technicians, deciding whether biofuels will predominate or not.

The theme “adapting to climate change” is already integrated into the strategic planning of practically all the cities of the developed world. If global warming will be of two and a half, three, five, or six degrees, it is a history that is yet to be written,

but will certainly come. Even though the problem is faced with radical measures, the temperature on Earth this century will increase by at least two to two and a half degrees Celsius, above the danger limit. All the cities will be impacted and they will have to study this phenomenon and prepare themselves. With the exception of Rio de Janeiro, which is at the forefront, the theme is not being addressed appropriately in Latin America. We are the only city with two inventories of greenhouse gas emissions, which has promoted two seminars, contracted two assignments in the academia and with companies to evaluate the impacts of climate change on the city. And they will be huge. It will rain more, with higher frequency, the sea level will rise, hindering the drainage of flood water. There will be problems in the Baixada de Jacarepaguá and in the rivers of the Guanabara Bay, mainly in the metropolitan region. This rise of the sea level, by one and a half meter, in general, will affect the infrastructure, but not so severely. All of this will lead to more days a year that will help in the proliferation of the *aedes aegypti*. However, Rio is aware and is in the process of becoming the first city in Latin America to have a plan of adaptation to climate change. This work is expected in the review of the strategic plan of the City Hall and is only the first step in the long way ahead.

It is important not to forget, in the midst of a moment of so-called euphoria, that other cities like Barcelona and Sydney have already had feelings of depression in the light of the farewell of the Games, whereby there is also literature available on this matter. This is another reason to make use of the present to invest in actually improving our future. We need to think of the pre-salt, of cultural changes in the work processes, etc. Perhaps it is difficult for a city to escape the so-called post-Olympic depression, but, if there are people in the world capable of this, it is us, the cariocas.





article

SUSTAINABLE EXPERIENCES IN RIO DE JANEIRO

ANDRÉ TRIGUEIRO

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JOURNALIST

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ABSTRACT

The promotion of large events in Rio de Janeiro could make life in the city more expensive, but it also encourages the confrontation of problems relating to basic sanitation, urban mobility and public security and the convergence between the spheres of Federal, State and Municipal Government. In this article, André Trigueiro stresses the need to employ efforts for social inclusion, water sanitation, intelligent management of solid waste and for compliance with regulations on soil usage. According to the author, we are moving towards the consolidation of a culture of sustainability.

Thinking of the growth of Rio de Janeiro today based on the impacts of investments in infrastructure that result from holding large events is a starting point for several issues. The first one is the fact that Rio de Janeiro has become a very expensive city. There is a real process of 'elitization' of the city, which surpasses the affluent areas and that should last until after the Olympics. Today, for example, the actual value of property is not known, because there are enormous fluctuations in price. In addition, the policy of occupying the communities, once under the control of traffickers, has also led to property valuation, now situated in places in which the presence of armed traffickers is no longer apparent.

However, when this climate of instability is over, it will leave the benefit of facing the historical problems of Rio de Janeiro, once the protocols confirmed by the International Olympic Committee and with FIFA determine greater acceleration in facing these basic issues that afflict the city, such as the lack of basic sanitation, urban mobility and public security. This means that, regardless of what else the competent authorities say, these events were determinant in making certain projects see the light of day and justify the important convergence of the Federal Government with the State Government and City Hall, an alliance that has direct impacts on the quality of life of the people.

Objectively, there is a sense that the security has increased in several communities of Rio. However, the problems have not disappeared, they are still present, but not in the same way they have been during previous decades. The problem of mobility, for example, is dealing with a lot of difficulties with the advance of the subway, with the new lines of the BRT (Bus Rapid Transit), with the planning of the bus space, with a still incipient attempt at establishing some order in the way taxis are stationed in areas of high tourist appeal, with the expansion of the bicycle path and bicycle lanes and with the adoption, by the municipal government, of the movement encouraging the use of bicycles, which are present today in various cities of Brazil.

ECONOMIC GROWTH AND DEVELOPMENT

Considering the ratio between economic growth and development, it is important to highlight that, for almost three decades, Rio de Janeiro has paid a high price for being the opposition, being excluded from part of the federal investments due to political issues involving the relationship between the municipal, state and federal governments. The current boom of investments coming into the city is basically due to the strong convergence between the three spheres and in a context in which there are no hindrances, as there were in the past, which drained resources from the city, such as tax evasion or misuse of funds for other purposes.

In addition, it is essential to understand that growth is not a synonym for development. Eventually, there may be synergy between them; in other cases, there may not. One example is the Maracanã stadium, which underwent a major reform for the Pan-American Games and, almost three years later, is undergoing a major reform. At first sight, there is in this case a consumption of resources directed towards the creation of jobs and income. However, the worksites that are open today one day will be closed and these workmen, if they have no opportunity of taking refresher courses, will seek better options in the market and will have to obtain qualifications for a market that is more demanding, which could increase the unemployment rate. Another example that helps illustrate this issue are oil royalties. The purpose of collecting the royalties is not to support the municipal districts and states that receive the resources, but to prepare them for the moment in when the oil ceases to exist, operating, therefore, as a lever towards other models. Soon, the expectation of receiving royalties from oil will be deceptive, because it will not last forever, while there are municipal districts extremely dependent on this in the State of Rio.

It is also important to stress that it is impossible to think of development without considering education. Education, however, continues to

be a liability, a huge challenge, considering the measurement of development. The figures of the GDP related to the creation of jobs and income and to tax collection could bring perspectives that are very good from the point of view of growth, but this does not necessarily imply in development. Rio de Janeiro does not have good public education and continues to have a poor assessment in Brazil in the requisite of school performance. It is a city with tourist vocation that will host the Rio + 20, part of the World Cup, the Olympics, besides being the main port of entry to Brazil, and, therefore, it should already be bilingual.

For wide and integrated regional development, all of the parties should be seen as players of the same game. It is not possible for each municipal district to have their strategy, their plan and their budget. It is necessary to create a metropolitan management between Rio de Janeiro and the peripheral cities in the areas of health, education, solid waste management and interconnected transport systems. Rio de Janeiro is an island of prosperity still surrounded by much poverty, the absence of the public power and the absence of the State. Although the city is excelling in various indicators and receiving many resources, it is important to reflect about what else can be built.

RIO DE JANEIRO: IS IT A SUSTAINABLE CITY?

From an academic perspective, we could speculate about the concept of sustainability and reach the conclusion that a city that can be sustainable can be self-sufficient. Therefore, it manages the impacts that it generates and supplies in its perimeter the demands for water, raw material, energy and food. From this perspective, Rio de Janeiro is definitely not a sustainable city – and there aren't any. What we can do is simply reduce the possible and avoidable impacts inherent to our culture, our habits, our behaviors, our lifestyles and our standards of consumption. With regards to Rio de Janeiro, to achieve the aim of being a more sustainable city it is important to resolve, first of all, the problem of inequality, which

is vexatious and provocative. This solution is based on the understanding that the main factor of social inclusion is an education of quality, which allows the person who lives in the favela (slum) today not to feel upset about their limited perspective of life. When this feeling exists, the city cannot be sustainable. Therefore, an enormous challenge of sustainability is to promote equality of conditions, of rights and of opportunity to access all services. This is the only way that society will be able to speak about sustainability with moral authority.

Secondly, it is important for Rio de Janeiro to have a water pact. The city has natural capital strongly backed by freshwater and salt water, which makes sanitation urgent. You cannot speak of a sustainable city, in dealing with Rio, without eradicating the negative anthropogenic interference in the waters. The third essential aspect to achieve the status of a more sustainable city is urban mobility. In São Paulo, for example, the main stress factor, unhappiness and loss of quality of life is the problem of mobility, traffic bottlenecks and the collapse of the transport system. Mobility, therefore, is a subject that goes beyond coming and going, and relates to stress, neurosis, predisposition to aggression, and to violence. Resolving this depends on the creation of restrictive measures regarding the circulation of vehicles, accompanied by a better quality of the mass public transport service that should be efficient, affordable and fast.

Another capital issue is the integrated solid waste management. Due to the fact that in the cities there is no more space for landfills, the review of this concept has become an urgent issue. Litter is something that has no use or purpose. Waste is not litter and demands technological centers, not only for recycling purposes. Thought should be given to how organic matter can be useful, as a fertilizer, as energy, or both. Waste needs to circulate. It is intelligent to think this way and many of the cities of the world invest in this direction, with the capacity of transforming expense into revenue. Rio de Janeiro has the vocation to be sustainable, it has the chance of declaring itself a

city committed to sustainability, but not with the current litter collection model.

My concept of an intelligent model of integrated solid waste management matches what I heard last year in São Paulo, at the C40 – the meeting of mayors from the most important cities in the world. We cannot think that the solution is to collect the litter that others throw in the street. The amount of waste per capita thrown away in the city reveals the level of non-citizenship and misinformation in the population. When we speak about integrated solid waste management, we are also speaking about education, punishment, of obsessive separation of waste and reducing the volume of litter sent to the landfill. Without segregation, the lifetime of the landfill decreases. The landfill of Seropédica, which has just received the litter from Gramacho, has a lifetime of 15 years, but would last longer if waste that is not litter was not deposited there. Rio de Janeiro separates only around 2% of the recyclable waste and has no policy regarding the use of organic waste. It is a very paternalist city regarding those that pollute. The last New Year's Eve, for example, there was for the first time a large advertising campaign asking the population not to take litter to the beach, so that the city could have a good start to 2012, the year of the Rio + 20. However, there was an increment of 240 tons of litter in comparison to the previous year. The demand has, therefore, been decided, urgently and through various media, to compulsorily institute in schools the notion that, by polluting and throwing litter in the street, financial resources are being wasted, instead of going on daycares, hospitals, municipal guards and teachers' salaries.

Last but by no means least, to achieve or pursue the model of a sustainable city, it is essential to respect the law related to the use of soil and a voracious and systematic fight against real estate speculation. For this, it is essential that the rules of construction should be extremely strict with regards to sustainable standards of building, i.e. that every property should have its own water meter, that there is rainwater collection and use, water treatment and recycling of gray waters, from the lavatory, shower, water tank, soapy water, like, for example, in Niterói.

ADVANCES SINCE THE ECO 92: COMMUNICATION SYSTEMS AND CULTURE OF SUSTAINABILITY

Since the ECO 92, there have been, without doubt, several advances, also in the area of education. Today, public and private schools provide some information on sustainability, which previously did not happen. The city of Rio de Janeiro, despite everything, is better, except for the multiplication of cars and the problem of inequality, already pointed out. There have been advances in the level of information, in the attention given to what needs to be done, in the level of mobility of the city, as shown through the use of bicycles, cyber activism, articulation and mobilization of people. An example of this was shown by the community of Leblon, which filled a public hearing to try and change the way the State Government wanted to progress with Line 4 of the Subway. These changes are occurring because there has been a change of culture. Now, the role of the population is to denounce why things are still moving so slowly, whereby the diagnoses are well produced and are so potent in relation to the situation and to what needs to be done.

The tools associated with the evolution of communication on sustainability are changing the culture and perception of the reality, are speeding up the exchange of information, for better or for worse, once their use determines the quality of the results obtained when they are used. It is necessary to recognize the merit of these tools in the Arab Spring, in the Occupy in New York, in the petition Veta Tudo, Dilma (Veto All, Dilma) and to the way in which the networks are articulated. The direct exchange of information enabled by the social networks can be useful in professional and citizen growth. Other examples of the major advance and articulation of networks are the TED Talks, a fantastic tool, in which a celebrity speaks for 18 minutes, transmits their message, enabling access worldwide, including translation and subtitles, free-of-charge. Or the elections that are taking place in Egypt today, after 50 years. The dictator, Hosni Mubarak has not managed to control the online movement initiated, since we are talking about communication systems that are protected.

On the other hand, another reading can be done considering the coefficient of alienation, the

percentage of people that take time and energy exchanging less useful and less essential information. These tools are used to accelerate processes, but do not have any power themselves. Their use determines the quality of this movement, the employment of energy and time. In this aspect, a horizon is unveiled whose destiny is still unknown. We are still in the early stages in the area of information technology and communication, and these tools will certainly have increasing impacts on the way we perceive the world and interfere in their routines, mobilizing us and articulating us socially.

THE LEGACY OF THE RIO + 20 CONFERENCE

The Rio + 20 does not mean the Summit Meeting of the RioCentro, but the UN meeting of the Chiefs of State and of a thousand simultaneous events, 500 of which will take place in the RioCentro. In addition, the Rio + 20 is already paying off, because it has transformed Rio de Janeiro into a vortex of energy, in a think tank behind a positive agenda. Many professionals are on their way to the city to participate in different debate forums, of different presentations on lines of business. The event has already paid off, starting with the planning of the meeting, which results in a change of routine. It is already possible to see the results of the agendas planned for the preparatory meetings, with the purpose of fine-

tuning the discussion and seeking a consensus, and also distinguishing the consequences of the debates between different corporate sectors, which are preparing training packages and technological fairs. Therefore, it is necessary to indicate that the Rio + 20 has begun, is already producing effects and impacts and is determining the need to discuss a positive agenda, which is a significant reflection.

Considering the speed of communication via cellphone and internet, which were not means used so much 20 years ago, the Rio + 20 will have a viral effect. It will also be an opportunity to verify how the existence of social networks can influence in the resonance of the debates that will take place in the city. It no longer depends only on large communication networks for information to circulate; there is connection, a web that is well tested and that will be, once again, put to the test in an enormous event with this profile. This is also related to governance, i.e. the capacity of an organized civil society to participate more actively in the democratic game and make decisions, without prejudice to the established rules, which is, also, one of the themes of the Rio + 20. The new idea is that governance is also possible with the help of new digital communication tools. The Rio + 20 will be an opportunity for experimentation in the midst of the diversity of forums and the multiple results that will be generated.





article

BENEFIT SHARING AND SUSTAINABILITY

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ABSTRACT

The scope of this article is to qualify and to provide the grounds for the concept of ‘fair and equitable’ within the context of Benefit Sharing (RB), which is paid by companies to traditional communities for the use of their Genetic Inheritances (PG) and of the Traditional Associated Knowledge (CTA). PG/CTA are the inputs used in R&D processes of companies, besides being types of knowledge that are economically useful. RB is reflected throughout the productive chain as a static cost, whereby social-environmental sustainability is the most important dynamic benefit that can be obtained. The lack of norms surrounding the rules of transparency that should be used in decision-making processes by the communities seems to be critical. The clause pertaining to inalienability is not restricted to offending the logic underlying market economy, but it rather represents a threat to the free choice of professions and the free choice of associations. The use of genetic resources implies legal, R&D and market risks none of which are considered by the communities. RB should take into account the value of this ‘market-making externality’, besides the well-being of the final product consumers. The companies must undertake an active role with regard to the transparency of the decision-making processes used by the communities; the allocation of resources, the preservation of biodiversity and of the social-economic progress of the communities

The domestic productive sector has been attempting to establish a relationship of partnership with the communities through associations and cooperatives, to access the Genetic Inheritance (PG) and the Traditional Associated Knowledge (CTA), to obtain the raw-materials to manufacture its products. The organizations providing these raw materials and their partners are located within sustainable development reserves – RDS, extractivist reserves, private areas, communities and municipalities. As a rule of thumb, there are several contract and shared benefit modalities, among which one should mention: a) Set amounts: the sole payment of a set amount; b) Income percentages: the payment of percentages resulting from the sale of products; and c) Mixed: the use of both modalities. There is also the sharing of non-monetary benefits, which includes different types of support toward the development of the communities.

The scope of this article is to qualify an executive concept of “fair and equitable” within the context of Benefit Sharing (RB), paid by companies to traditional communities for the use of their Genetic Inheritance (PG) and of the Associated Traditional Knowledge (CTA) to such genetic inheritance.

Even though concepts such as justice and equitability have had a long history, the expression “fair and equitable” has grown in practical importance when it

was coded in the Convention on Biological Diversity (CDB), which caused it to be reflected in the Brazilian legislation. An important duality in the search for the “fair and equitable” is established when companies attempt to both accomplish their legal obligations, largely defined by the language and the concepts used by CDB, as to establish economic relationships that are both effectively fair and equitable to the traditional communities, as well as to decisively contribute towards the preservation of the social-biodiversity associated with Brazilian natural resources.

There are, therefore, two questions that are inherent to the idea of “fair and equitable” which should be explored. The first one is understanding in depth the meaning of this expression in CDB language. The legal sectors of companies are partially responsible for this task. They are responsible for its compliance with the existing legal norms. The concern shown by the companies about their social responsibilities, however, leads them to require studies which go beyond the mere accomplishment of the CDB and of local legislations, improving the practical definitions of justice and equitability within the context of the activities carried out by each of them.

To state that a given situation is both fair and equitable is a normative judgment, which is essentially different from a verifiable statement about the characteristics of



a given situation or object. The premise, for instance, that a given company has been fully complying with all of its environment-related laws does not bring about concepts such as “morally right”, and in principle, it does not admit any subjectivity. On the other hand, the statement that the company is being socially, fairly and equitably responsible with regard to the treatment it gives to social-environmental questions is a subjective one, even when guided by the legislation in effect, until it is fully qualified and grounded analytically.

The guiding axis for any analytical qualification made in this article means the systematic application of an economic theory which would allow one to incorporate an analysis that is essentially grounded on the rights to property within a market economy. It is important to stress that this does not mean ignoring all the anthropological, cultural and environmental specifics pertaining to the question.

TWO PARADIGMS OF “FAIR AND EQUITABLE”

As mentioned before, the expression “fair and equitable” appears in the CDB to summarize an overall encompassing conceptual view on ideal regimes pertaining to economic relations between traditional

peoples and the market economy. This is a “synthetic paradigm”, which resulted from negotiations carried out under the social pressure of different groups from different countries, therefore making it oriented towards the coding of different values that arose as result of the consensus reached during the ECO 92 conference.

In the discussions about justice and equity carried out in this article, one should not start out from a political definition, like the one that appears in CDB, but from an analytic reconstruction of the social values that the latter attempts to express. An attempt is therefore being made to provide the guidelines and to organize the debate over the questions that are being studied within the context of an alternate “analytic paradigm”, albeit one that does not diverge from the one stated in the CDB. Maximum adherence has been sought in all the points of this construction to the essential values of a “synthetic paradigm”. There are, however, inconsistencies that are pointed out between the guiding norms of CBD and the economic comprehension of its normative principles.

A correspondence exists between the analytic and synthetic paradigms and the two categories or normative judgments. The first category, which is naturally associated with the analytic paradigm, is called as bottom-up (a term inherited from the systems



theory) study, in which both simple and abstract analytic elements are applied in a systematic manner. These elements are manifestly associated with simpler and less controversial analytic judgments, and are combined in an architecture which allows one to reach logically consistent normative ideas.

The second category, called top-down consists of derivative judgments of values that are external to analytic constructions, which derive from moral, ethical and political values which are considered to be fundamental. Some of the more important normative judgments which are known are of the top-down nature, such as the concept of universal, inalienable human rights. On the other hand, by approaching a complex world directly, top-down judgments may come up against the concrete possibilities presented by reality, and get into conflict with other similar consensual judgments, or even go into logical inconsistencies, which are not very apparent at first sight.

In spite of the foregoing, Top-down concepts directly sway the building-up of bottom-up judgments within analytic paradigms, because they identify values that may not be present in the classical elements of approach. Thus, the question of social-biodiversity, despite being widely discussed, is not a focus of the basic economic models pertaining to the rights to property and to the maximization of individual as well as of collective uses. This does not mean, however, that the analytic grounds behind the economic theory are rendered invalid. In the first instance, these factors may be incorporated into the architecture of normative theory in economy. Speaking more pragmatically, the question of Benefit Sharing may be found at the intersection between the market economy and the concern with the preservation of social-biodiversity, and one must consider them in parallel within a unified conceptual framework.

STRUCTURAL CONCEPTS REGARDING THE CONCEPT “RIGHT TO PROPERTY”

The economical analysis of social relationships from a well defined point of view may generally deal with the notion of “property” which allows one to focus on more complex questions, such as bargaining, strategy and balance. The focus of our analysis here is different for two reasons: in the first instance,

the applicability of the use of modern strategy and equilibrium analysis tools from the point of view of optimizing rationality is questionable in instances when said economic transactions are being guided by special rules; by corporate and social responsibility policies and by focusing on social-biodiversity.

The question of compatibility between the special legal mark regarding the rights over the PG/CTA and the standardized rules governing the concept of ‘property’ within a market economy is more important. In order to study this question, which is essential to be able to describe “fair and equitable” at the intersection between ‘market’ and ‘social bio-diversity’, the very concept of ‘right to property’ needs to be clarified. The starting point for the economic theory about the rights to property lies in the delimitation between domain and partition. Let us take a tract of land as an example. While this is a domain that may be naturally defined, any rights imbued into the land tract property deed are subject to several limitations. For instance, both the mineral riches found in the underground as the air space over the land tract lie outside of the right to property attributed to the land property deed.

The holder of the deed possesses the authority to use the land for farming or real-estate purposes; to transfer this deed of ownership and to prevent any third non authorized parties from accessing said space. These authorizations are granted from rules that have been defined in the relevant legal document. With this conceptual scheme, the agglomerate of the authorizations contained in the property deed constitutes a partition, that is, a fraction of the domain over which the rights to property are attributed. Other relevant partitions refer to the exploitation of the subsoil, which belongs to the State and to the air space, the use whereof is regulate and which may be used by all.

From the point of view of economic theory, one may interpret PG/CTA like partitions (under the domain of ecosystems), the ownership whereof is attributed to traditional peoples. In other words, the institutional acknowledgment of said PG/CTA may be translated as being the attribution of specific property rights over the peculiar uses of said ecosystems. Following this line of thought, the Benefit Sharing consists in the remuneration for the use of the PG/CTA, which is similar to income obtained from capital, or more

closely, from the licensing to use patents and other forms of intellectual property.


INTELLECTUAL PROPERTY AND SUSTAINABILITY

Intellectual property is a clear case where there are partitions that have been defined by legal norms, and which effectively create a form of property on the strength of the law. The very concept of intellectual property has a background of controversies within the very orthodox way of thinking regarding economy, although recently a consensus has been reached to organize the debate into a common language.

The question of intellectual property may be organized in terms of its benefits and social costs. It should be currently understood that the acknowledgment of such type of property generates static costs while the benefits provided are dynamic and of a wide reach. Static costs tend to directly affect the productive chains that depend on said intellectual property, including the final consumer (see ‘medical drugs and medical treatment costs’). Dynamic benefits, on the other hand, have relatively diffuse impacts since they generate an environment conducive to innovation, even though they also have a direct effect on the capacity of the holder of said intellectual rights to finance future research.

The analogy between intellectual property and the question revolving around the PG/CTA is a natural one, even while presenting conceptual problems which require a more careful examination. On the one hand, PG/CTA are inputs for R&D projects carried out by companies, and as such, they represent forms of knowledge that are useful from the economic point of view. On the other hand, even though the Benefit Sharing is reflected all through the productive chain bearing static costs, it does not become immediately clear what are the dynamic benefits that have been envisaged by the protection given to the PG/CTA.

A concept that allows one to finish this analogy is the concept of social-environmental sustainability which may be considered from a conceptual point of view as being a relevant dynamic benefit to protect said PG/CTA, considering the importance of the ecosystems and of the biological diversity contained therein

to render social-economic progress viable over the long run, as well as the top-down value attributed by Brazilian culture to the preservation of the life style of traditional peoples. 

SPECIAL LEGAL REGIMES AND THEIR INTEGRATION TO MARKET ECONOMIES

The current regimes to protect social-biodiversity have been developed within the bosom of the environmentalist movement, and ever since they have been revised by the parties that are directly involved from a legal point of view which considers inadequate mechanisms, rules and ways of analysis that are characteristic of a market economy.

The basic principles underlying this ‘special regime’ were enacted by the Biological Diversity Convention of 1993, and they are updated periodically by the so-called Conference of the Parties. Their more concrete expression is the molding of the so-called ‘sui generis legal regime’. Among the more momentous characteristics of this alternate legal frame one may find a concept of ‘moral’ rights, which are attributed to communities regarding their PG/CTA as well as the definition of norms pertaining to the Benefit Sharing that escape the previously defined economic logic.

The criteria of underlying economic theory find both virtues and defects in such regimes. It is necessary to recognize that the vision on sustainability, which is present in the CDB, expands on these policy formulating horizons. However, at the same time when this way of analysis increases in amplitude, it loses depth. From the precepts on “special regimes” it is not clear how the inevitable conceptual conflicts should be dealt with when relations are established with a market economy. Furthermore, it is not clear that such principles would effectively have the normative results that may be expected.

It is possible to point to a range of conceptual conflicts, beginning with institutional priorities and ending with the question of representativeness within the communities. The use of bio-diversity by traditional peoples has been acknowledged by the Agreement on Trade-Related Aspects of Intellectual Property Rights – TRIPS, which is the international protocol governing intellectual property, such as

prior art, recording the cases in which patents were cancelled as result of evidence within this context. On the other hand, alternative legal regimes do not acknowledge the TRIPS framework, considering that the rights over knowledge which they attempt to protect are not innovation and discontinuity oriented, but they rather contain the idea of inter-generational continuity between contemporary individuals.

This ‘principle of continuity’ is problematic, not only from the point of view of its compatibility with institutional mechanisms that have been adjusted to Market economies, but also from the point of view of the social choice theory. Several theorems over simple choice processes (such as the ordering of preferences, the choice of leaders by majority vote and the allocation of resources) – all of the above show the normative difficulties generated by a type of analysis which fails to clarify the question of the representativeness of leaders or committees that have been empowered to communicate the decisions reached by the community to other agents and groups. The lack of landmarks regarding minimum rules governing transparency and justice with regard to the internal decision processes followed by communities may be added to the characteristics of the rights that have been defined by alternative legal regimes which directly restrict participating individuals.

The most critical aspect of these is the inalienability clause, which is contrary to the common idea pertaining to property rights. To summarize, the right to alienate corresponds with the right to transfer the ownership of the property/partition to third parties. No single individual responsible for a significant portion of the CTA being attributed to the community may be excluded from the rights to any ‘ordinary’ intellectual property that may have been attributed to it, but the members of the community as well start having difficulties in getting away from it. These initially constraining results are not restricted in challenging the market economy logic, but they also threaten established human rights, such as the right to freely choose a profession and the choice of free association.

BENEFIT SHARING, CORPORATE SOCIAL RESPONSIBILITY AND THE CONCEPT OF “FAIR AND EQUITABLE”

All of the above reasons show an accrual of evidence on behalf of the notion that “fair and equitable” is not a concept that limits itself to a normatively “ideal” pecuniary value. Even the methodologies that are based on micro-economic logic, such as the estimation of values such as “the willingness to pay” and “the willingness to accept” present problems of



convergence in cases where they do not have any viable substitutes, such as in the case of the PG/CTA. Therefore, even if one were to validate the concept of “virtual bargaining” between optimizing agents, the theory of evaluating assets ex-market, currently allows one to calculate certain limits between which said bargaining would take place, but which has been left without definition as to the results found within this interval.

It thus becomes necessary to take fully into account the role played by the companies in their interaction with traditional communities. In the first instance, it should be noted that in many cases there wasn't any (before companies started using a given type of vegetation), economic exploitation of natural resources to which said PG/CTA refers to when remunerated. Thus, any benefits that may be generated at the time of the integration of a natural asset to the company's chain of production are not only allocated to the company itself but to traditional communities as well, which get access to a new mechanism to expand their possibilities pertaining to material well-being, as well as a channel according to their own pace and logic to integrate themselves to market economies. By making use of a given genetic resource, companies incur a series of risks, starting with legal risks (within this gray area of contractual law), ranging from the risks that are associated with R&D and to the with market risks per se, none of which are fully considered by the supplying communities. Any calculation pertaining to the Benefit Sharing should take into account the worth of this “market-making externality” which in other situations (such as during the opening-up of the capital of a legal entity) makes use of specialized agents who are explicitly remunerated.

Secondly, the pure and simple application of CDB precepts and of alternative legal regimes is far from assuring a situation that is fully “fair and equitable”. With regard to intellectual property, any potential dynamic benefits should be weighed against static costs as perceived in an explicit R&D chain, and which lies within the capacity of the companies to employ and to expand their production and to access the final consumer who must face higher prices arising from mechanisms that have not been directly ratified.

It is especially necessary to make sure that the productive sector is able to counterbalance any

potential dynamic benefits arising from the preservation of the environment and from the well-being of its consumers. The said productive sector has no direct relationship with the revenues obtained by the companies, and therefore, with the amount being allocated as RB, is due to the different trade-offs that need to be faced by the individuals. When prices increase, some consumers will stop buying the products, which in turn will have a knock-on effect to the income earned by the companies and over the Benefit Sharing from which the communities benefit, while other consumers will keep on buying these products, albeit at the cost of losing their capacity of purchasing other goods from other economic sectors.

Thirdly, the action of companies inside of venues occupied by traditional peoples must ideally extend beyond their strict obligations. There are serious restrictions to actions that a company may take in view of the restraints imposed by domestic legislation, which regulates CDB concepts. To that effect, one must make an analysis of all anthropologic contracts and reports to determine whether the obligations incurred by the companies within said CDB paradigm are being fulfilled, and, whether there are any differences within each productive segment.

Within its possibilities, however, the productive sector must assume the role of an organizer in the integration of traditional peoples in market economies, by adopting an observational stance with regards to the transparency of decision-making processes used by the communities and their allocation of resources, as well as in monitoring the preservation of biodiversity and of the social-economic progress enjoyed by said communities.

One may thus conclude that a “fair and equitable” concept that would be normatively consistent is actually multi-dimensional, comprising not only the pecuniary values posted under the label of “Benefit Sharing” and the adherence to CDB's conditions, as well as the adherence to the institutional circumstances which assign each company the unique role in the life of the communities. As such, this is a changing concept, the development whereof reflects the advances made in the legal consensus to which companies are subject, and in the social relations between traditional peoples and their mechanisms of integration into a wider market economy.

article

10 STEPS FOR A GREENER CITY

ASPÁSIA CAMARGO



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ABSTRACT

In this article, Aspásia Camargo highlights the importance of the results of the Rio + 20 Conference to benefit the city of Rio de Janeiro in the long term, promoting the practice of sustainability beyond the duration of the event. To do this, she mentions 10 important aspects that must be observed and go beyond the environmental field, highlighting the role of the cities as strategic players in the advancement towards sustainable development.

Rio de Janeiro cannot be just the city that has hosted the largest Conference on the planet - ECO 92 - and is hosting an international conference with the importance of the Rio + 20. It must keep up with these major events so it can honor these commitments in the most practical way possible, applying sustainable development in its daily life. This means doing now what we were unable to do in 1992: To create a legacy for this Conference to allow us to make Rio de Janeiro a truly global sustainable development center, which the Conference invites us to do. We want to clearly set out the passage from an isolated and loser environment to another situation, in which the environment joins the economy, social equity and social inclusion, and developing a green economy, which is the main drive of the discussion of the month of June.

The main goal of Rio + 20 is to turn the sustainable development into a reality, which means applying in practice what is known in theory about the roles, commitments and laws. Two important legacies may result from this. The first is to create a global center of intelligence, as we wanted the International Center for Sustainable Development (CIDS) of the FGV Foundation (FGV) to be, had there been the required international conditions for that to happen at the time. The CIDS was opened at an International Conference on the Guanabara Bay, leaving behind memories and history. As we are currently rethinking the decontamination program of Guanabara Bay, it is worth remembering what we learned in 2000 when the CIDS was opened, and reflect on what we should do for this program to succeed, based on the international experiences that preceded it.

The second legacy is to turn Rio de Janeiro into a model city. This requires a major effort, requiring partnerships, resources, more integrated policies, imagination, and will to apply the sustainable development in a reality which deserves to be transformed and improved. Only with this spirit a sustainability proposal can be produced for the city. A proposal that is not just for Rio de Janeiro but to all cities of Brazil and the world, because the principles are more or less the same. What varies, in fact, are the concrete situations that may be faced and the pragmatic proposals that may apply.

THINKING LOCALLY AND ACTING GLOBALLY: THE CITY AS A STRATEGIC PLAYER

The novelty of the Rio + 20 Conference is that cities will occupy a different place than they occupied so far at the international conferences of environment and development. As we all know, representation in the United Nations is of the national States, not cities. The urban centers were always separated from the discussion, commitments and agreements that were built. In the climate conferences I attended, the image of what cities in fact represented for the United Nations and for the international discussions on sustainability was a very significant: periphery. To our misfortune, we found in this period that cities pollute the most – 70% of the pollution comes from there – but on the other hand they are also doing the most to overcome that stigma and build faster solutions to solve the problems of climate change.

There is currently a group called C40, which has already gathered the 40 cities around the world willing to confront the greenhouse gases. The group will have great importance in the Rio + 20 meeting. In practice we verify that while the countries pollute a lot, some cities of the world like New York, London, San Francisco, Los Angeles, and some States, such as California, have achieved amazing reduction results. Therefore, on the international level it is as if we were discussing with countries that demonstrate little ability to solve the problem, while their own cities are managing to go further, beyond the international requirements agreed and decided.

In Rio de Janeiro, the Law 5.248 on climate change, as of January 27, 2011, originated from a project of mine, was voted in partnership with the City Government. The negotiation with the City Government regarding the goals and how they could be deployed over time was critical, because the Legislative Body does not have the ability to operate at this level, nor does it have the required legal and institutional powers to undertake an operation as specific and objective as this one. To define this process, there were negotiations with the City Government, which made a series of calculations from the emission inventories.¹ It was agreed that they would decrease greenhouse gas

emissions by 20% until 2020 and an interesting part of this process would be concentrated in 2012, when we would have reduced 8%, and in 2016, when we would have reduced 16%.

The insertion of the city as a strategic player in the agreements that are being made on sustainable development is a great victory and a great opportunity of Rio + 20. That is why it is important to build a world center in Rio de Janeiro, not only for sustainable development, but also to be an important vector attached to green cities and on the best practices that large and small cities are already offering.

REQUIREMENTS FOR SUSTAINABILITY

1: Governance:

One of the first requirements for a more sustainable Rio is governance, which means strengthening the power of the city, which was not noticed at the Conference in 1992, and was the most important lesson we have had since then. We need to develop a transparent administration, monitored through indicators and clear goals of sustainable

development, such as Rio + 20 also recommends. In practice, this means that there must be a more decentralized and more participatory planning.

The novelty that emerged between ECO 92 and Rio + 20 was an extraordinary increase in the awareness and practice of sustainability and eco-efficiency by companies. Also a model of global legislation was built and there was an extraordinary expansion of laws and controls through major conventions, protocols and international agreements. But it was important to realize the extremely pernicious institutional vacuum that was present to perform those commitments and changes. There was the Agenda 21, which was idealized in the global, national and local levels. But no measure was implemented – except in some cities, because there were no institutional conditions to exercise and practice such a policy, which requires leadership of the Mayors, Governors and the President of the Republic, above the political and partisan fragmentation that Governments are obliged to adopt. This kind of fragmentation and excessive specialization prevents the integration of policies and is today a major global problem.



When we talk about global governance, we are asking the United Nations, which is the government of governments, to also have this concern to integrate its parts, its bodies that work completely isolated, which does not favor the creation of a more accelerated and more positive sustainability dynamics. We need to strengthen the United Nations Environment Program (UNEP), create a Council of Sustainable Development next to the Secretary-General. There are large agencies, but currently they act in a disconnected form. It is therefore necessary to join the environment with the economy, the economy with the social institutions, to meet the need for a greater articulation, of a better integration of policies, which is one of the goals of Rio + 20.

The city is the main space protagonist of the sustainable development, as the Greens have been saying for decades, represents the global thinking and local acting. We are perfecting this thinking and saying that we also need to think locally and act globally and, in fact, this integration between the global and the local is part of the governance that we must apply. In other words, to change the level Rio de Janeiro must be a global city, losing some of its provincialism, isolation, and must trade with the world, learn from the international experience, and teach the best practices it exercises – which are exemplary.

2: City: Live ecosystem

The city is a living, human, integrated ecosystem, and all of its parts have functions, so they must communicate with each other. A good example is the district of Jacarepaguá, which was the largest and greenest district of Rio de Janeiro. Today, while the green is vanishing, the buildings are multiplying without a sewage collection network, which is being discarded in the lagoons in Barra. Homes in Jacarepaguá, for example, have no access to sewage collection and there is no plan for this to happen. How can you build a city without thinking about infrastructure? Sanitation and transportation are two serious problems for which the solutions are still short of what we need in face of the speed with which the city grows.

The base of a sustainable city is the harmony between society and nature, which never existed,

since cities were created to overcome nature. Nature was seen as unfriendly, unhealthy, as a shelter for disease-transmitting animals. The city is the refuge that humans found to interact more easily, to create a density of communication, to offer services, and also to exercise innovation and creativity. Then, once a dense mass of people occupied such spaces, it was necessary to create the infrastructure by force, waterproofing, building houses, with all the problems that resulted from this movement.

The rivers that flow in Rio de Janeiro are all polluted, hidden, dominated by aggressive concrete structures or often disappeared while the city was being occupied. In contrast to this, the new and current vision of the city is an organic one, seeking a more harmonious relationship with nature. With all the problems that lie ahead, with the global warming and climate change, the position that has been natural for a long time is now being avoided in exchange for the search for new ways of interaction.

3: Natural Vocations of Cities:

Cities have natural ‘vocations’ that must be identified, developed, protected, stimulated, and shared with the people. The principle of natural ‘vocation’ is based on history, culture, and also in geography and ecology. In truth, it comes from what the nature offers as an opportunity and what the culture has built in history. The historical heritage must be used intelligently and integrated to tourism, leisure and knowledge, because it is not something just to be contemplated. It must be used and combined with the sustainable development.

The natural beauty of Rio de Janeiro, for example, is shared by all the inhabitants of this city, of Brazil and of the entire world. It is a wonderful city, but what is being done with these wonders? The sands of Copacabana beach in the year 1960 bear no relation to the sands of today, which are dirty. Most beaches in Rio de Janeiro are environmental preservation areas, but are not treated as such. There is no management plan, no monitoring process, no management council, nothing of what is required by law for an Environmental Protection Area (EPA). As the Government does not have

suitable facilities to hold cultural events, it uses the public space of the beaches in an abusive way. The result is that the ‘vocation’ of Rio is not being respected, not by bad intent, but because of a lack of environmental awareness. For convenience, Governments use public spaces to perform functions that actually cause damage which subsequently have a high cost to be reversed. Respect the ‘vocation’ of Rio means preserving and inventing, because the landscape is also invented, appropriated. The Sugar Loaf Mountain (Pão de Açúcar), for example, was discovered late, not by Pedro Álvares Cabral or by Amerigo Vespucci, but only in the second half of the 19th century when it appropriated the city. The landscape is the magic of the meeting between nature and culture, but we can also create it as large landscapers as Burle Marx and Fernando Chacel did.

4: Economy and Entrepreneurship

Emphasis on the creative industries, full of leisure and culture. The city is also the world headquarters of the green economy, green infrastructure, renewable energy, sanitation, mass transportation, and green civil works; and of innovation, technology and creativity, which are linked to the green economy, but that are not limited only to the environment. Rio de Janeiro must take advantage of the extraordinary privilege of being one of the cities with the highest number of universities and qualified people in science and cultures in Brazil, which is the engine of any creative city that wants to become global, efficiently employing this heritage. We need to invest in technology and culture networks, the information technology, museums, and libraries.

5: Creativity and Innovation

The principle is creativity and innovation as the economic force linked to technology, to knowledge, to the intellectual capital of the city, which is the largest in Brazil and one of the major intellectual assets of the world. This aspect requires a partnership with the Federal Government, as well as changes in our patent registration system, which is slow and paperwork-oriented and faces the obstacle of a bureaucracy stronger than the desire to apply the knowledge more intelligently.

6: The three Rs

Building a relationship between economy and the

environment to allow for the principle of the three Rs: reduce, recycle, and reuse wastes, practicing the selective collection and recycling. In Rio de Janeiro, we have not reached 1% of selective collection. This is relevant information, since the recycling industry is powerful and the city is not developing it properly.

7: Agriculture

Rio de Janeiro still believes in a retrograde philosophy which suggests that agriculture is as an obstacle to the growth of the city. This idea resulted from the slum-growth process that rural areas have suffered as a result of large plots of land not becoming productive, which paved the way for irregular occupations. This context has been turned into a pretext for a number of changes in the law that, for example, reduced the size of the plots, which on the other hand facilitated the housing construction in these areas. The serious side effect of this policy is that the city began to ignore the importance of an agricultural belt, of sustainable agriculture, and integration of rural and urban, which today is the mark of the most developed cities in the world, with the cultivation of green roofs and community vegetable-gardens in the cities, among other measures.

Since the cities are the dynamic force of the planet, they need to incorporate the functions of the rural world, which would contribute to creating food security, as the State of Rio de Janeiro produces very little agriculture and imports everything. Even though there is ample space, there is no agriculture and the distance between city and country creates difficulties in accessing natural and healthy products, and wastes the opportunity to create a chain of small producers, organic fairs, and all innovation that comes with them. Since Brazil has Embrapa (Brazilian Agricultural Research Corporation), it cannot consider agriculture only as an export activity, but rather as part of the city’s economy.

8: Sanitation

We must consider the universalization of sanitation. The prediction is that many decades will be needed to solve this problem, since there is a mismatch between the need to sanitize the city and the ability to develop the service and monitor the urban growth.



9: Renaturalization of Rivers

A parallel aspect is the renaturalization of rivers, which must be returned to the cities in a clean state, as well as the lagoons and watersheds.

10: Green infrastructure

Protecting the coastal region and minimizing the emission of greenhouse gases in the city through a green infrastructure are other aspects that I would like to highlight. This means not only reducing emissions, but also implementing mitigation actions by means of the green infrastructure and adaptation, including accident prevention. Although steps have already been taken by the city operations center, which is efficient, this movement can be improved in many ways. More investment in waterway transportation, bike paths, and mass transportation would help to minimize the transport shortage affecting the city, and would have positive effects on the reduction of emissions of gases contributing to the greenhouse effect. To do this, we must also rescue the preservation units from abandonment and enlarge the green areas.

In light of the aforementioned, Rio de Janeiro lacks a refining of its Strategic Plan. That said, the example of the discussion forum enabled by the Carioca Pact – the Rio we want for 2020 (Pacto

Carioca – O Rio que queremos para 2020), held in 2010 by the City Council of Rio, with the support of Pereira Passos Institute and FGV Projetos, is a good example of opportunity to create a participatory city, which is able to influence this process of change and discuss the problems of the city.

A LEGACY FOR THE WORLD

The possibility to take a leap into the future requires the city to disentangle itself from the traditional closure and isolationism, and assume the role of a global city. For centuries Rio de Janeiro has been an internationally renowned city, but what is being done with this historical heritage? The ‘vocation’ of Rio de Janeiro and of the country is international, but this ‘vocation’ was inhibited during a long cycle in which the nationalist Brazil closed itself from the world. The present moment induces reflection on the new world philosophy that is in a consolidation process, which has been transformed into a social and political practice, and about how our city can enjoy this inspiration and these changes to its own internal transformation and to be in fact a sustainable example for the world. Creating a legacy in which we can assimilate the inspiring best practices from other countries as a national heritage is the most important result we can have from Rio + 20.

A photograph of a tea plantation. In the foreground, there are rows of green tea bushes. A woven basket is visible on the left. In the background, a person wearing a white hat and a red shirt is working in the tea field. A large tree trunk is in the center.

article

INNOVATION AND SUSTAINABILITY: A MANAGEMENT MODEL FOR RIO

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ABSTRACT

This article presents a reflection on the innovative model of sustainable management that has proved to be efficient in resolving problems and proposing changes in emerging economies. Based on the model proposed by Stuart Hart and C.K. Prahalad, there is a search for a new way of managing business and investments with the population that is found at the bottom of the pyramid (BoP). The intention is not to validate this model, but to deepen the debate on sustainable management that is capable of generating positive socio-cultural, economic and environmental impacts in the integration of the BoP, and, at the same time, prove to be profitable and effective. The city of Rio de Janeiro is fertile ground for the application of innovative strategies like this one and may benefit from initiatives from public and private companies that wish to adopt more sustainable models of management.

INNOVATION AS AN INDICATOR OF SUSTAINABLE DEVELOPMENT

For almost two centuries the “richest” nations have conditioned us to think according to a model of management guided mainly by metrics of production and consumption, and based on strictly economic-financial indexes. Based on this short-sightedness and trained to assess the prosperity or development of a country only based on the indexes of production, consumption, income distribution, Gross Domestic Product (GDP), and other co-related indexes, we overlook the search for other forms of management and assessment. Such thinking has created many challenges for developing nations, which have started to replicate such metrics and models as unquestionable parameters of management. This rationale, however, has proved to be unsustainable in a world where almost 4 billion people live below the line of poverty.

Over the last 20 years, we have observed emerging economies finding alternative models of management, with the introduction of innovative solutions for their local problems. In the case of Brazil, the challenges inherent to the areas of education, infrastructure, economics, health, and the environment have required new ways of thinking from public and private companies, collaborating and innovating.

Aware of this movement and the gaps left by the traditional model, international organizations have started seeing innovation as an important indicator of development of a country. The Organization for Economic Co-operation and Development (OECD), for example, launched in 2010 a study to classify and measure the innovation of countries proposing 100 indicators of innovation. The Global Innovation Index (GII), published since 2007 by e-lab of The Business School for the World (Insead) is another initiative that confirms the international effort in the search for new metrics for new advances. Metrics that allow the assessment of the performance of countries that have grown and stand out in the global stage with policies and innovative models of management. The tables 1, 2 and 3, revealed by the international ranking of the GII 2011, classify Brazil among the top 10 countries that obtained the best results in the index of Efficiency in Innovation and in the index of Ecological Impact and biocapacity; besides appearing amongst the top 12 leaders in Creative Solutions.

In Brazil, this innovation has been generated mainly by the increased integration between industries, companies, the government, research institutions and academia. These partnerships have enabled significant advances in the various sectors of the economy. Companies now recognize the strength of the middle class and have started gearing their activities and products to these people. And, today, we follow - as cariocas [people from Rio] or proud neighbors – the special moment of transformation experienced by Rio de Janeiro with a new perspective of management of our city. We have some examples of innovative initiatives that have been contributing towards making this city a showcase of successful experiences. With the arrival of the large international events and with a focus on the discussion of the Rio + 20 conference, thought must be given to the strategies that have proved to be innovative and sustainable in their widest sense.

This article highlights an innovative model of management, proposed by Stuart Hart and C.K. Prahalad, and how this strategy can be implanted sustainably through our managers. The model suggests a management that recognizes the population that is at the base of the pyramid (BoP) as its main partner in the development of products, services or sustainable business.

A NEW MODEL FOR SUSTAINABLE MANAGEMENT

Since the academics C.K. Prahalad and Stuart Hart introduced the concept of “wealth at the base of the pyramid” (or BoP: Base of the Pyramid 1.0) in 1998, this idea spread from academic literature to large corporations and multinational companies. Unilever, Philips, Johnson, P&G, Pfizer, Microsoft, Nike, ABN Amro, Tata Group, Cemex, Dow, Natura and other multinational companies are examples of companies that have directed their business strategies to serve the base of the pyramid. The authors classify the BoP as a socioeconomic sector represented by 4 billion people in the world, or 57%, which live below the line of poverty. In Brazil, BoP is composed by almost 20% of the population and in the city of Rio de Janeiro by 18%.

Many managers, however, have applied the BoP concept to their business strategies restrictively,

TABLE 1
INNOVATION EFFICIENCY INDEX RANKINGS: TOP 10

RANK	COUNTRY/ ECONOMY	EFFICIENCY RATE	INPUT RANK	OUTPUT RANK	INCOME	INCOME RANK	REGION	REGIONAL RANK	POPULATION (US\$ MILLIONS)	GDP PER CAPITA (CURRENT PPPS)
1	CÔTE D'IVOIRE	1.06	125	79	LM	1	SSF	1	21.6	1,701.2
2	NIGERIA	1.03	119	62	LM	2	SSF	2	158.3	2,203.3
3	CHINA	1.02	43	14	LM	3	EAS	1	1,354.1	6,828.0
4	PAKISTAN	1.01	123	67	LM	4	SAS	1	184.8	2,608.6
5	MOLDOVA, REP.	1.01	77	29	LM	5	ECS	1	3.6	2,854.3
6	SWEDEN	0.92	5	1	HI	1	ECS	2	9.3	37,904.6
7	BRAZIL	0.91	68	32	UM	1	LCN	1	195.4	10,412.1
8	ARGENTINA	0.90	82	40	UM	2	LCN	2	40.7	14,538.3
9	INDIA	0.89	87	44	LM	6	SAS	2	1,214.5	3,270.1
10	BANGLADESH	0.89	114	69	LI	1	SAS	3	160.4	1,416.3

SOURCE: THE GLOBAL INNOVATION INDEX (GII) - 2010

TABLE 2
CREATIVE OUTPUTS

COUNTRY/ECONOMY	CREATIVE OUTPUTS		CREATIVE INTANGIBLES		CREATIVE GOODS AND SERVICES	
	SCORE	RANK	SCORE	RANK	SCORE	RANK
HONG KONG (SAR), CHINA	57.6	1	54.8	27	60.4	1
SWEDEN	56.7	2	59.3	14	54.1	4
SWITZERLAND	54.4	3	63.5	9	45.3	11
CANADA	54.0	4	54.2	29	53.9	5
DENMARK	52.4	5	50.7	43	54.1	3
GERMANY	51.7	6	56.1	23	47.2	8
NORWAY	50.6	7	50.9	40	50.4	6
NETHERLANDS	50.6	8	46.7	55	54.5	2
AUSTRIA	49.0	9	58.0	16	40.0	15
JORDAN	48.9	10	70.1	4	27.7	47
ESTONIA	48.9	11	55.2	25	42.6	13
BRAZIL	46.9	12	56.2	22	37.5	20

SOURCE: THE GLOBAL INNOVATION INDEX (GII) - 2010

TABLE 3
ECOLOGICAL FOOTPRINT AND BIOCAPACITY (DEFICIT) OR RESERVE
(GLOBAL HECTARES PER CAPITA) - 2007

RANK	COUNTRY	SCORE
1	BOLIVIA	100
2	MONGOLIA	74.49
3	PARAGUAY	68.52
4	CANADA	67.98
5	AUSTRALIA	67.85
6	FINLAND	61.84
7	BRAZIL	60.97
8	NEW ZEALAND	60.19
9	NAMIBIA	58.39
10	ARGENTINA	56.46

SOURCE: THE GLOBAL INNOVATION INDEX (GII) - 2010

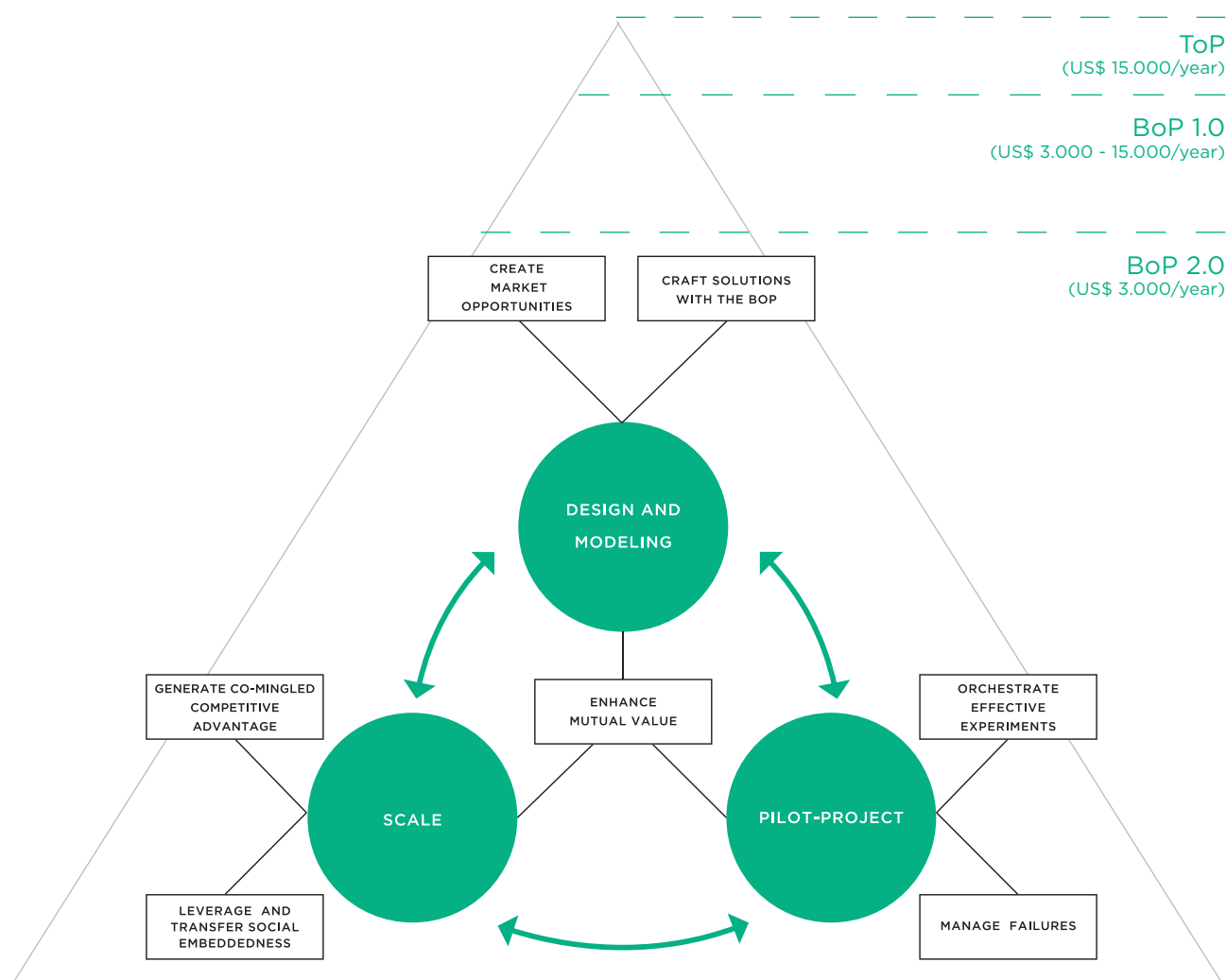
directing them towards “selling to the poor”, presenting solutions and making this population a simple consumer. Understanding this sector exclusively under the perspective of production and consumption is proving to be a major misunderstanding. In various other cases, companies believe they contribute towards sustainable development in deprived regions only through creating businesses that creates jobs or include some type of action regarding the environment.

The strategy related to the base of the pyramid 2.0 sees this population as an active partner in the development of a business or initiative of a company, getting these people to participate from the modeling and design of a product to its operation and marketing. This model establishes the creation of a mutual value between the company and the local community, where both are winners.

For Eric Simanis “a market of consumption, in its simplest term, is a lifestyle built around a product”. This phrase summarizes what the author understands as a great distinction between market and needs, and suggests that for the construction of a market that uses the BoP 2.0 strategy, there is the need for an understanding of the business under the perspective of the community – through a process that builds value and sense. This process includes a greater comprehension of the lifestyle of the local community, its traditions and norms, its routines and habits, and its forms of interaction and relationship. A strategy of innovation that is deeply embedded in the local values creates trust and commitment of this population, engaging them and integrating them in the process. Companies that acknowledge and apply the concept of social embeddedness – working with a value or habit that is embedded in that community – know how to co-create a new business structured to create demand and sustainable opportunities, instead of



FIGURE 1
DEVELOPMENT WITH BoP: 7 PRINCIPLES FOR CREATING MUTUAL VALUE WITH
THE BASE OF THE PYRAMID



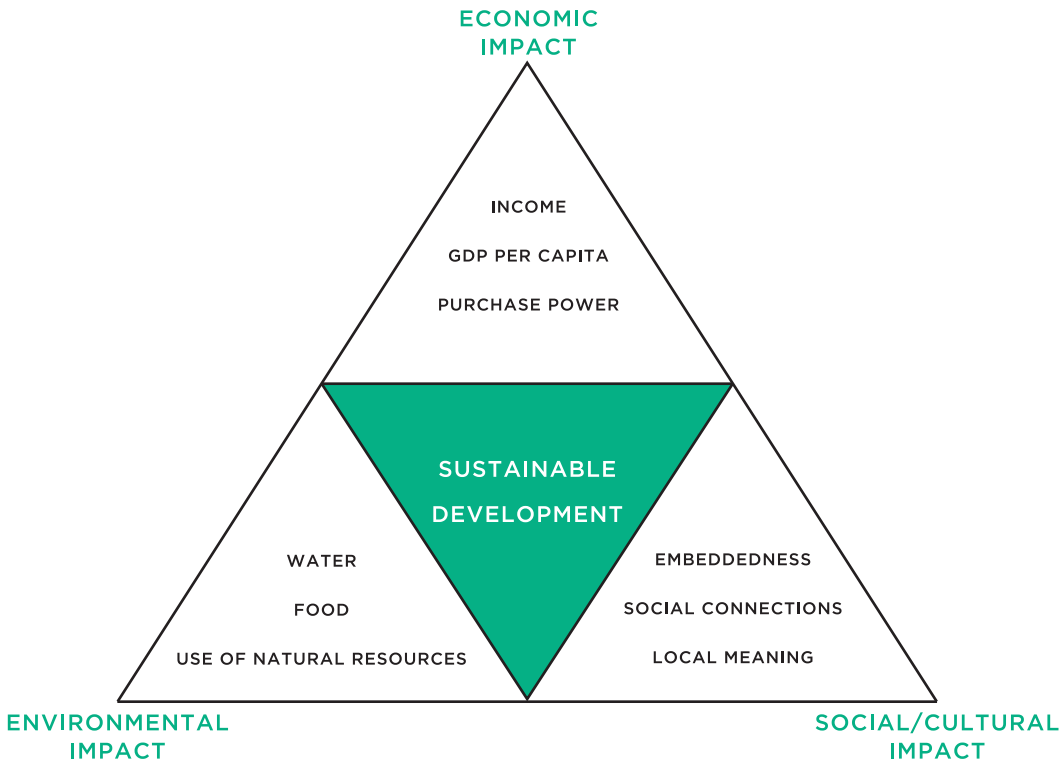
SOURCE: LONDON, T.; HART.S - NEXT GENERATION BUSINESS STRATEGIES FOR THE BASE OF THE PYRAMID: NEW APPROACHES FOR BUILDING MUTUAL VALUE

68 TABLE 4
BOP 1.0 X BOP 2.0

BoP 1.0	BoP 2.0
BoP AS PRODUCER/CONSUMER	BoP AS BUSINESS PARTNER
DEEP LISTENING	DEEP DIALOGUE
REDUCE PRICE POINT	EXPAND IMAGINATION
EXPAND DISTRIBUTION	MARRY CAPABILITIES
TECHNOLOGY DEVELOPED WITH THE PRODUCT	NEW AND SUSTAINABLE TECHNOLOGIES
ACCESS VIA NGOS AND/OR GOVERNMENT	PERSONAL AND DIRECT RELATIONSHIPS
STRUCTURAL INNOVATION	EMBEDDED INNOVATION

SOURCE: COPYRIGHT STUART L. HART 2012

FIGURE 2
THE BoP TRIPLE BOTTOM LINE



SOURCE: STUART HART, CORNELL UNIVERSITY, CENTER FOR SUSTAINABLE GLOBAL ENTERPRISE

imposing ready-made and customized solutions. For such, three phases in the development of a product or service are highlighted.

Phase 1: “Opening up” - co-generated business concept

Where the company emerges in the community and works conjointly through a two-way dialog, based on trust, exchange of ideas and learning. This phase culminates in the co-creation of a business model or product prototype that integrates the capacities and resources that the company offers to the community. This phase usually requires 3 to 4 months for the complete immersion of the teams.

Phase 2: “Building the ecosystem” - co-developed business model

In this phase, the local community, teams and strategic partners (companies, government, financial institutions, universities, NGOs) work conjointly in the development of a pilot product

and test it on a small scale. From this prototype already tested in the community, the product can be replicated on a larger scale. Usually a year of maturing of the model is recommended.

Phase 3: “Enterprise creation” - Scale

In this phase the teams involved work on the launch of the product in new communities. The model is improved based on building the capacities of local management to manage and make the business feasible. The result is the creation of a shared business that is returned to the community in the form of a product or service, in which the local population participates actively in the construction. With this product developed in an embedded manner in the local community, the result is a fertile and committed market. This phase usually requires 6 to 9 months.

These steps require companies to see these communities as partners and not only as clients. The BoP 2.0 strategy assumes that for sustainable



management it is necessary to create a shared value with room for direct and personal relationships, instead of the legal or contractual; in which the mutual dialog encourages innovation, exchange of knowledge and the combination of native and local capacities. The company should also know whether its proposal includes new and sustainable technologies that create a favorable impact on the environment.

Once the model has proved to be successful the company can extend its production and distribution, or even reverse its initiative to the top of the pyramid by applying the reverse innovation (taking a product or business from the base of the pyramid to the top of the pyramid, Vijay Govindarajan).

Finally, for a certain business, product or service to have sustainable development, it is necessary to prove that the benefits and solutions generated are better and greater than the possible negative impacts caused. The organization should measure this performance under three dimensions of impact: socio-cultural, environmental and economic, as shown in the figure below.

India has some good examples of companies that have obtained global recognition for using this model in their business strategies, for example, companies like Selco, Grameen Phone Bank, Essilor and the Tata Nano Group. These companies know how to meet the issue of sustainability; create a “green leap”, create socioeconomic opportunities and new potentials in poor communities, and at the same time use their initiatives commercially. In Rio de Janeiro there is fertile ground for corporate and public initiatives that use models of sustainable management aligned with the population that is at the bottom of the pyramid. Natura, Bradesco and Petrobras have been working on several fronts that use this model.

Using the example of the end of the activities of the Gramacho Landfill under the three dimensions proposed by the BoP 2.0 model we can discuss the incredible potential and wealth that can be generated. For over 30 years families earned a living from waste and recycling waste. At this moment the public initiative, together with Faetec and other institutions, propose some measures that support this community composed of waste pickers, the local community that depends exclusively on this landfill as a productive activity. Some measures include: indemnity of R\$14 thousand to each waste picker; training and qualification programs; the creation of a recycling center for 500 waste pickers. These measures are important and can create favorable socioeconomic impacts for the community, but require a greater integration of this community as a partner.

Knowing how to work together and creating mutual value with the knowledge acquired by this community during the 30 years is where the wealth proposed by the BoP 2.0 model resides. This thought is summarized in the testimony given by a former waste picker: “I wanted to work in a recycling cooperative or in selective collection. I wanted to use this money to create a scrap yard and continue in this line of business. But just one press costs R\$10 thousand. We are the link in this discussion about waste treatment, but we do not know how to make use of this knowledge”. The informal knowledge, which is at the bottom of the pyramid, and management strategies that see this population as a partner in the development of sustainable solutions, represent a great leap in socio-cultural, economic and environmental terms. This management requires managers that think creatively and contra-intuitively to resolve contradictions and conventional thoughts; challenge presuppositions and focus on models that prove to be innovative and sustainable.





article

FORESTS AND CONSERVATION UNITS WITHIN THE STATE OF RIO DE JANEIRO

OSCAR GRAÇA COUTO

Oscar Graça Couto

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ABSTRACT

In his article, Oscar Graça Couto presents the main norms and laws of the State of Rio de Janeiro focused on the issue of climate change. In the author's opinion, the State is in a vanguard position in relation to the country, but it is important to observe the application of these norms. In this sense, hosting the Rio + 20 Conference should be seen as an opportunity of inserting concern with the climate on everyone's agenda, not only to benefit the environmental sphere, but also the social, economic and ethical spheres.

AMONG THE DIFFERENT UTOPIAS AND DYSTOPIAS, WE DISCUSS HERE THE LAWS PERTAINING TO CLIMATE CHANGE IN BRAZIL, IN THE STATE AND IN THE MUNICIPALITY OF RIO DE JANEIRO AND SUSTAINABLE DEVELOPMENT

Regardless of how many times it presents itself daily, and regardless of its repercussions to millions, perhaps billions of people, and regardless of how many times from the past until now it may have made the newspaper and TV headlines and come-up in Hollywood-type apocalyptic productions, and even if it popularized a theme which previously was restricted to scientific symposiums, and even if it made it to the public domain and interest, the question pertaining to climate changes has not been able to generate effective changes in behavior. Starting with public entities and ending with productive or civil organizations, throughout the population, very few have undertaken any action that would be capable of dealing with the problem, at least on the scale in which it has been presenting itself.

Many causes have been contributing towards this inaction. We have the skeptics, who may be divided into distinctive categories. There are those who, against all evidence, simply deny the phenomenon called 'climatic changes', refusing to face a problem which they deem to be inexistent. There are those who have acknowledged the phenomenon, albeit they attribute it to natural and insurmountable causes, without offering any relevant and anthropic contribution. There are also those who acknowledge the problem, who, to some extent, admit the fact that human activities have been responsible for it, but who understand that at this point in the game, and in face of the escalation of the challenge, there is little or nothing that can be done. Skeptics, those who have resigned themselves to the fact or the Nihilists have never been the agents of transformation.

There are also those who have found reasons to suppose that the effects of the changes will be felt only in a distant future, and that, therefore, it makes no sense to sacrifice demands or aspirations as to consumption of current generations on account of fears that may afflict future generations, and which, however, may not be confirmed, even. Technological solutions, that are capable of mitigating and rendering the unmanageable effects of these changes have also contributed towards the inaction of the optimists. Then we have the egoists,

the hedonists or the extreme optimists who would never promote any large changes.

There are also the pragmatists or the realists, according to whom no relevant social changes are to be expected who may oppose deeply rooted practices and habits. In effect, it is claimed that no tangible threat would arise in the foreseeable future which would require a real human mobilization, at least the kind of mobilization that would be capable of operating effective changes. War – in face of a real, concrete, threatening enemy, has unfortunately been able to bring about great changes. In the eyes of many (or at least of the majority of people – one should admit) there is the perception that the enemy called "climate changes" has not been endowed with the characteristics that would require it to be battled with cohesion and with the spirit of sacrifice that wars demand. The pragmatists and the realists, once they determine the unfeasibility to effect radical changes, content themselves with mitigating and not very ambitious changes or to mere adaptations. The pragmatists and the realists get attached more readily to conformity rather than to changes and don't expect to take large steps to deal with the problem.

Furthermore, it is being claimed that today no international leaders or institutions that exist today are capable of promoting and of conducting radical, noticeable and necessary changes. According to the pragmatists and to the realists, we shall not face climatic challenges for the same reasons that, in spite of the efforts and the feelings of many, have led us (humanity) to live with relative indifference or resignation with hunger and the slew of other horrors which in the very 21st century itself still afflict billions of people the world over.

There are also those who attribute the entire responsibility for changes to others – to governments, to companies and to third sector societies. To these people, the planetary reach of the problem render any action irrelevant and useless, sacrifice, or individual relinquishing. Others ponder as to the contrary: due to alleged and spurious interests and short-term visions, and the capturing of public and politic agents by economic groups that are uninterested in any factors other than the maximization of their profits, nothing effective should to be expected from governments or from the corporate sector. Therefore, the responsibility for changes would essentially befall upon the individual (and on his personal choices) as a citizen and as a consumer. Dystopians and, depending on the

degree of their engagement and influence, the utopians do not cause any radical changes either.

In any case, there is a relative consensus today that the phenomenon represented by climatic changes does exist and that it needs to be fought against. Discussions as to forms, instruments and the extension in which such fight should be carried out, and perhaps in particular, who should fight them and with what resources, have caused large controversies.

No problem of such magnitude is capable of being resolved by simple solutions, much less by one single solution. The author of this article does not wish to look down on discussions involving reformists and revolutionaries, nor does he want to disregard the polemics arising between those who, on the one hand, get attached to certain market dogmas and those who on the other, sustain the need for radical reforms - not only economic but also moral and ethical (or voluntaristic, as their critics would like to think).

It is acknowledged from herein that there may be a myriad of instruments and ways that may be more or less efficient (as time shall tell) to be used to fight the causes and the effects of global warming. Some of these instruments have been created by the market, which makes use of its own instruments. Others take advantage of the market environment, but with the influence of incentives, or else, of the inhibitions which Public Authorities may (and should) offer or impose, and which would be intended to correct the flaws and the asymmetries of this market.

It is in the midst of this context of weights and counterweights, to be and that it should be, of utopias and of dystopias, of realities and needs, that laws are enacted. Ideally speaking, laws should serve a social purpose, and they should arise from a consensus reached within the context of the legislative process. According to a different point of view, laws serve the interests of specific groups, more apt to make their will prevail, even if dissonant in the eyes of many, from a legitimate, collective and greater interest.

At any rate, to a greater or to a lesser degree and regardless of the environment in which they are conceived and of the influences that are inherent to such a process, laws may – indeed – institute new social practices. Legal norms may thus create, extinguish, change, strengthen

or depress markets, inducing changes on all planes, from the collective to the individual one.

What the author is going to analyze here, even if very succinctly, is the agglomerate of norms which, in Brazil, in the State and in the Municipality of Rio de Janeiro deal with the question of climatic changes. It should be observed that in the formal sense, i.e., starting with the mere existence of norms about the subject, this agglomerate of norms places the Country, the State and the Municipality of Rio de Janeiro in a forefront position. In fact and in relative terms, there are not many government entities which, within the international scenario, are capable of regulating the matter, enacting goals and obligations that need to be complied with by the private as well as public sectors.

The question that is always asked – one should even say ‘crucial question’ – is whether these norms will be effectively applied, if they are going to leave the planning stage, and, if applied, whether they will be capable of promoting actions that would be able to revert or to mitigate a picture which, as everything seems to point out, is in fact demanding changes under pain of the most severe penalties.

Within the federal context, the enactment of Law 12187 in 2009 instituted the National Policy on Climate Changes (Política Nacional sobre Mudança do Clima) - PNMC the actions whereof need to be “carried out under the responsibility of political agencies and of public administration organs” which shall abide by the “principles of precaution, prevention, of the participation citizens, of sustainable development and of common, albeit differentiated responsibilities” (this last one within the international context).

Among other factors, the measures that need to be adopted under the aegis of this PNMC must not fail to consider “that everyone has the duty to act in the benefit of the current and future generations, to reduce the impacts caused by anthropic interferences over the climate”. Thus, in line with the command instituted by Article 225 of the Federal Constitution, everyone has the duty to exercise inter-generational solidarity as well as the obligation set in the norm to comply “with the different social-economic contexts for its application,” besides sharing the burdens and the encumbrances deriving from the economic sectors, the populations, and the communities which, in an equitable and

balanced manner, are interested in assessing individual responsibilities regarding the pollution emitting sources and the effects that are caused by them towards the climate.

Still pursuant to the aforementioned law, and among others, the PNMC has the following objectives: (i) the compatibilization of social-economic development with the protection of the system governing the climate; (ii) the reduction of the anthropic emissions of greenhouse gases in regards to their different sources; (iii) the strengthening of the anthropic removing of greenhouse effect gases from the national territory; (iv) the implementation of measures to promote adaptation to climate changes by the three spheres of the federation, with the participation and the collaboration of economic and social agents interested or benefited by them, especially those that are particularly vulnerable to its adverse effects; (v) the preservation, the conservation and the rehabilitation of environmental resources, with special attention to be paid to the large natural biomes considered as being National Assets; and (vi) the consolidation and expansion of areas that have been legally protected, and the providing of incentives to the reseedling of forests and the recomposition of the vegetation covering of degraded areas.

Taking advantage of the panacea suggested by the still fluid concept of sustainable development, this norm

explicitly reinforces the search for and the conjoining of economic growth, the eradication of poverty and the reduction of social inequalities.

Among the directives that need to be complied with by Public Authorities when applying the PNMC, the norm envisages (i) the support to and the fomenting of activities that would effectively reduce emissions or promote the removal of greenhouse gases by eliminating them; (ii) incentives to practices, activities and technologies pertaining to low greenhouse gas emissions, and also, of sustainable production and consumption standards.

And, among the instruments that it has established to enforce its purposes, PNMC especially envisaged (i) fiscal and tax measures intended to incentivize the reduction of the emissions and the removal of greenhouse gases, including differentiated tax rates, exemptions, offsets, and incentives to be established by specific laws; (ii) the establishment of preference criteria in bids and public competitions comprising public-private partnerships and the authorization, permission, granting and concession to exploit both public services and natural resources, for the proposals that provide better use of energy, water and other natural resources and to reduce greenhouse effect gases as well as their residues.

As a formal commitment, even though with the explicit and somewhat anomalous proviso as to its voluntary



nature, the PNMC sets forth that the country “is to adopt actions to mitigate the emissions of greenhouse gases, with the purpose to reduce between 36.1% and 38.9% the emissions that have been forecast until 2010.”

In 2010, and within the context of the State of Rio de Janeiro, the PNMC was complemented by Law 5690 which established the “State-wide Policy on Global Climate Changes and on Sustainable Development”. This norm states the purpose to promote integration between “public state transportation, energy, health, sanitation, industry, agriculture, forest-related, economic and tax policies” to attain its objectives which, in turn, resembled those that had been envisaged on a national scale.

Under the above conditions, it was established that plans, programs, policies, goals and actions relating to activities associated with the release of greenhouse gases, whether on a government or a corporate scale, should incorporate in their strategies measures and actions that would benefit the low-carbon economy, complying with specific directives relating to the energy, transportation, residues, building, industry, agropecuary and forest-related sectors.

Among the instruments available to the State Policy on the Climate, one should especially highlight environmental licensing, which, in regards to undertakings that require a significant emission of greenhouse gases (as defined in the regulations) will require that the issuance or the novation of licenses to install or to operate them would require the presentation of (i) a forecast of the emission of greenhouse gases by the undertaking; and (ii) a plan to mitigate said emissions as well as to offset them, and the appropriate agencies are to establish the respective standards to that effect.

In addition, it has been envisaged that the issuance of new licenses to install undertakings that would generate a significant volume of greenhouse effect gases may be entailed to the assumption of the obligation to fully or partially neutralize the respective emissions.

By way of Law 5248, in 2011 the Municipality of Rio de Janeiro instituted the Municipal Policy on Climate Changes and on Sustainable Development, which similarly set forth the “goals to reduce anthropic emissions of greenhouse gases for the municipality.”

Corroborating a principle which had already been established within the international and domestic

contexts, and envisaging its specific incidence in the case of greenhouse gas generators, the Municipal Policy on the Climate refined the concept of “pay as you pollute”, which it defined as being the “acknowledgment that the polluter must bear the costs of repairing damages to the environment, avoiding passing this cost on to the community in general,” and also envisaging the “internalization of social and environmental costs of the undertakings, taking into consideration local, regional, domestic, and global interests as well as the rights of future generations.”

Thus, within both the state and municipal context, it was established that “environmental licenses for undertakings which produce significant amounts of greenhouse gases are under the condition of a presentation of a plan to mitigate said emissions and to measures of offsetting them as determined by specific legislation.” So, and in theory, the municipality was made ready to accomplish the goals to reduce by 20% the emission of hot-house effect gases until 2020 as compared to the level of emissions within the municipality in 2005.

In this way, it may be seen that both within the federal, Rio de Janeiro state and municipal contexts there are norms (which are all in tune with one another) which at least in theory offer conditions that would allow the country, the State and the municipality to contribute to face a challenge which, like the one related to the climate, is of a planet-wide nature, and one that necessarily depends on regional and local initiatives such as those that have been envisaged in said norms.

Their efficient implementation, and, as the case may be, their improvement represent at the same time both a right and a duty of Public Authorities and of the community for the benefit of current and future generations.

Said responsibilities become even more relevant when the world’s attentions turn to the city of Rio de Janeiro, which will become the stage for events that will have international repercussions, and which will be of great symbolic importance, such as Rio + 20, the World Cup and the Olympic Games. All of the above represent an excellent opportunity to firmly make worth of what has been written and to add to everyone’s agenda and in the eyes of the world, concern with the climate, taking away beneficial consequences in the environmental, social, economic and ethical spheres.

A full-page background image of the Christ the Redeemer statue perched atop Corcovado Mountain in Rio de Janeiro. The statue is a large, white, Christ-like figure with outstretched arms, standing on a rocky peak. The mountain is covered in lush green vegetation. Below the peak, a thick layer of white mist or clouds fills the lower half of the frame. The sky above is a clear, pale blue with some light, wispy clouds. The overall scene is serene and majestic.

article

RIO LANDSCAPES: SUSTAINABLE DEVELOPMENT, CULTURE AND NATURE IN THE CITY OF RIO DE JANEIRO

LUIZ FERNANDO DE ALMEIDA AND MARIA CRISTINA LODI

Luiz Fernando de Almeida

PRESIDENT OF IPHAN

Graduated in architecture at the Catholic University of Campinas, Luíz Fernando de Almeida is president of the National Historic and Artistic Heritage Institute (IPHAN) and of the Advisory Board of Cultural Heritage, the administrative tribunal that is part of the structure of IPHAN. He is also the Coordinator of the Monumenta Program of the Ministry of Culture. He taught History of Architecture and Urbanism, History of Art and the Architecture Project at the Catholic University of Santos, in the Armando Álvares Penteado Foundation and at Universidade Paulista.

Maria Cristina Lodi

SUPERINTENDENT OF IPHAN IN RIO DE JANEIRO

Graduated in architecture at the Faculty of Architecture and Urbanism of the Federal University of Rio de Janeiro, Maria Cristina Vereza Lodi took on the Superintendence of the National Historic and Artistic Heritage Institute (IPHAN) of Rio de Janeiro, in January 2012. She has been coordinating projects in the area of cultural heritage in public and private institutions, e.g. in the City Hall of the City of Rio de Janeiro, in the Management of Heritage and Culture of the Roberto Marinho Foundation and in Iphan, coordinating the nomination of the City of Rio de Janeiro as a World Heritage Site.

ABSTRACT

The nomination of Rio as World Heritage, in the category of cultural landscape, challenges the country to create new parameters for heritage policies, moving from a restrictive field of a sector-based policy to a territorial, global and sustainable vision. The article deals with characteristics that make Rio de Janeiro a possible world heritage site and the importance of this title to raise awareness about the preservation of the city and the need for management that prioritizes sustainability.

The candidature of Rio de Janeiro's cultural landscape will be judged at the World Heritage Committee meeting to be held in Saint Petersburg, Russia, from June 24 until July 6, almost at the same time or directly after the United Nations Conference for Sustainable Development - Rio + 20 to be held in Rio de Janeiro. This succession of agendas is not a coincidence, even though it has not been planned. It has a purpose and shows the Brazilian Government's concern with the sustainable development issue in accordance with national public policies.

Brazil has the 5th largest territorial expansion in the world, a population of 200 million inhabitants, and the biggest forest in the world, the Amazon Rainforest. For this reason, it is our responsibility to promote a discussion on public policies to harmonize development, culture and nature.

The process of discussion on public policy development in the field of heritage protection today involves the direct answer to the question: has the heritage sector anything to say about the sustainable development? Based on the competence of the National Historic and Artistic Heritage Institute (Iphan) in the development of the national heritage policy, we may answer Yes and for that reason we must stop thinking of it as a sector policy and see it rather as a policy incorporated under an articulation with other public policies, especially by constructing a territorial vision and a landscape vision. Once we apply that vision, it allows agreement with several other public policies for a same territory.

The Rio candidature for World Heritage in the category of natural landscape gives us the first approach to the challenge of setting these new parameters for heritage policies. This is a great challenge, both for the national heritage and the world heritage, as it will become the first urban

cultural heritage to become a World Heritage, and the bases for the construction of its protection and management have not been set out.

The Brazilian thesis is that one of the roles of the World Heritage Convention¹ is to articulate, change and foster new local public policies. Since the Convention was adopted in 1972, the international community has embraced the concept of sustainable development. The protection and preservation of natural and cultural heritage is a significant contribution to sustainable development².

Rio candidature is a possibility to ratify a public policy in the heritage area, which shifts from the restricted field of sector-related policy to a territorial, global and sustainable view. To develop this new view, we have started together with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and its World Heritage Center a discussion process by holding a series of expert meetings in Brazil over the last ten years, about the concept of urban cultural landscape and the relationship between heritage and sustainable development. From the Brazilian perspective, both are interconnected. And the time when the notion of sustainable development will approach the heritage policy will be the time when the latter will address primarily the landscape issue related to territory.

RIO DE JANEIRO: LOCAL LANDSCAPES BETWEEN THE MOUNTAIN AND THE SEA

There are 18 Brazilian areas classified as historical, cultural or natural sites included so far in the UNESCO World Heritage list. The Brazilian government has been requesting for some time that this select group be expanded by including the Cultural Landscapes of the City of Rio de Janeiro, which is a much desired recognition that, together

¹ To ensure to the maximum extent possible the identification, protection, preservation and promotion of World Heritage, UNESCO Member Countries have adopted the World Heritage Convention in 1972. The Convention determined the establishment of a World Heritage Committee and a World Heritage Fund, both of which are in operation since 1976.

² In Operational Guide for World Heritage Convention Implementation.

with the world title, would further strengthen the sense of the need to preserve this valuable asset for future generations, and contribute to the development of new heritage policies from a territorial landscape protection view.

Iphan, which is responsible for the preparation of this candidature together with the Ministry for the Environment, through Chico Mendes Biodiversity Preservation Institute (ICMBio), with the Government of the State of Rio de Janeiro and the Local Government of the City of Rio de Janeiro, understands that nothing represents more the civilized stage, geniality, challenges, contradictions and the cultural singularity of the Brazilian society than the Cultural Landscape of the State of Rio de Janeiro. The exceptional universal value of Rio de Janeiro is a result of the sensitivity of man's action at facing an absolutely unique and stunning nature that has encouraged them to construct intentionally and resolutely a special city where the man-city-nature relation remains balanced and is recognized as a monument to the life quality and to the pleasure of living in a city.

The good candidate to World Heritage under the title of Rio de Janeiro: Local Landscapes between the Mountain and the Sea fits the typology of Cultural Landscape. It is composed of structuring Rio landscape elements extending from the South Zone to the western part of Niterói in Greater Rio, encompassing Tijuca Massif that is characterized by steep slopes and great rock outcrops, such as Corcovado, Pão de Açúcar and Morro do Pico, most of which is covered by tropical vegetation both native and resulting from reforestation or planning arrangements, such as in Botanical Garden and public parks.

It also includes the areas where the coastal landscape has been used for centuries to build fortifications to defend the city, such as at the entrance of Guanabara Bay with its historical forts,

and to construct leisure facilities for the residents, such as the Public Pathway, Flamengo Park and Copacabana Beach.

STRUCTURING LANDSCAPE ELEMENTS

The five elements – Tijuca National Park, Botanical Garden, Flamengo Park, the entrance to Guanabara Bay and Copacabana Beach – represent the city areas where a large mountain, forest and sea interface predominates and maintains the main patterns of cultural, geomorphologic and ecological diversity that characterizes the fact that man has maintained this special relationship since the city's foundation until present day. The man-nature relationship in Rio de Janeiro is unique and represents the city's soul.

MOUNTAIN, FOREST AND GARDEN

As a result of an extensive reforestation, Tijuca National Park is considered an example of the world's most successful natural forest regeneration. It has a significant biodiversity with endangered species, and was declared in 1991 to be a part of the Biosphere Reserve, in recognition of the importance of its natural assets for the world ecosystem equilibrium. It also has a significant historical representativeness, with buildings dating back to the 18th and 19th centuries, as well as 120 archeological sites located within its boundaries, which show records of coffee farms that covered the Massif in the 19th century.

A romantic landscape treatment in late 19th century made it a cultural landscape with organized paths, recreational areas, belvederes, and appreciation of the water streams. Around 1940, it was restored with the support of the landscape painter Roberto Burle Marx, which shaped the current features of the Park.

At the foot of Tijuca Massif, between Rodrigo de Freitas Lake and the mountain, Rio de Janeiro's Botanical Garden was established as a garden of exotic plants and Eastern spices under the initial name of Real Horto (Real Garden). Of its current 137-hectare surface area, 53 hectares are open to and highly appreciated by the public. It is a neoclassical-shaped arboretum containing a vast array of on-site plants arranged into geometric alleys, among which very high palm trees stand out and give amplitude to the site. The remaining space is integrated to Tijuca National Park and is intended for the preservation and scientific research developed by the Botanical Garden Research Institute, which is a world reference center for its studies on Atlantic Forest.

GUANABARA BAY ENTRANCE AND ITS DRAWN WATER BANKS

The entrance to Guanabara Bay is determined by its limiting pontoons, where (Niterói) Morro do Pico massif to the east, and (Rio de Janeiro) Morro do Pão de Açúcar to the west stand out. In the first centuries of the city life, those two rocky formations constituted important reference points for the city's defense, including artillery batteries and fortresses at their feet. That role was added to that of icons

of urban cultural landscape and a landmark of the city view.

Morro do Pão de Açúcar was recognized as a major world geological site. It is surrounded by vegetation that is characteristic of a tropical climate, with fragments of the Atlantic Forest and rare vegetal species that only flourish in two places of the planet, both in Rio de Janeiro. As the Brazilian mountain with the highest number of climbing routes, Pão de Açúcar receives every day hundreds of Brazilian and foreign alpinists, mountain climbers and ecologists. The cable car started to work in 1912. Together with Corcovado, it is currently the main city view point and an icon of tourism in Rio de Janeiro

In the part of the city facing the bay and the ocean, after successive landfills, the Public Pathway, Flamengo Park and Copacabana Beach lie between the man-made water banks, the last two of which were based on exemplary landscape projects designed by Roberto Burle Marx. They are examples of urban parks constructed at different historical times. The first was constructed in the 18th century, and the other two were constructed in the 20th century, all with the same objective: to provide connectivity between elements of the landscape, highlight the urban environment quality, and



promote points to appreciate and enjoy ocean and Guanabara Bay. Flamengo Park and the Public Pathway show the result of a great experiment, that is, the cultivation of trees under adverse climate and soil conditions. The landscape project designed by Roberto Burle Marx for Copacabana Beach with its exceptional geometric design imitating the sea waves gained international recognition by using a Portuguese stone mosaic, which is a symbol of the city as a tropical beach resort.

CITY AND LANDSCAPE: THE LIVE FABRIC OF TEMPORAL AND SPATIAL SOCIAL RELATIONSHIPS

In the City of Rio de Janeiro, uses and practices of its space and cultural presentations have shaped the landscape in a unique way. Rio's urban culture has not only reflected and actively constituted but also distinguished the relationship between natural environment and cultural expressions, thus shaping the city over time. In this city of exuberant nature, uses of open spaces for socialization were demonstrated, such as long walks, strolls and meeting in the streets. "Street culture" has valued green spaces, forest contours and sea shore. People developed the habit of living intensely in this landscape in their daily life and festive times.

Football in parks and on the beach, walks and bicycle rides in Copacabana and Ipanema, Flamengo Park and Rodrigo de Freitas Lake sidewalks stand out. Samba groups in squares, outdoor fairs, and bars are privileged leisure spaces.

JUSTIFICATION OF EXCEPTIONAL UNIVERSAL VALUE

According to UNESCO Operational Guide, the Exceptional Universal Value establishes the cultural or natural significance of an asset that is so special it goes beyond the nation's boundaries and becomes important for all present and future generations worldwide.

The site proposed in the city of Rio de Janeiro is a unique example where the man-city-nature relationship remains balanced and recognized as a monument to quality of life and to the pleasure of living in the city. That tropical landscape the construction of which was intentionally and resolutely based on an exuberant nature, was founded on the unique historical and cultural processes based on human value sharing from the Portuguese colonization to present day, thus resulting in an exceptional assembly of public areas, historical gardens, natural parks and monuments,



the scientific meaning, formal qualities and symbolic cultural associations of which give them an exceptional universal value that is worthy of being shared by the whole mankind.

Man-made transformations to the mountain and seashore, and the way in which they were designed and occupied make the city a world reference. This was first due to the experience in the application of 18th and 19th century European landscape standards to the tropics, and subsequently to the development of a modern landscape school that has grown around Burle Marx and spread over the world.

Rio de Janeiro is characterized by one of the most complex cultural landscapes produced by the exchange between two different cultures associated with a natural site marked by its originality. The intentional use of nature, at first for the economic interests of Portuguese colonizers, has shaped Rio's landscape over the years. Later, the imposition of tropical nature and rough relief, combined with the cultural characteristics of the men who settled here, made the natural elements sovereign to the city landscape, thus mostly ensuring the preservation of local biodiversity. In the second half of the 19th century, environmental disasters related to coffee growing and the city expansion caused concerns about environmental preservation, which resulted directly in the reforestation of such vast areas that were formerly used for agriculture, and the creation of Tijuca National Park. The model implemented in the Park was a first in Latin America, as it met an environmental demand of which the population was little aware of at the time, and offered attractions for visitations. Such concepts were immediately disseminated in several Brazilian and American cities.

Rio de Janeiro has established itself since its foundation as having one of the most beautiful sceneries in Brazil and in the world. The dazzling natural landscape where it is situated has inspired for five centuries the creation of a vast iconographic legacy, one of the few still existing on the planet, produced by Brazilian and foreign professional and amateur artists. As a result of living and viewing the city, there are other works of exceptional quality and importance, such as travelers' reports, music, literature, cinema and photography, which offer multiple views of Rio de Janeiro. From the view of current traditions associated with the site and proposed as world heritage, a series of expressions

that emerged in the city have spread out all over the world: samba, bossa nova, football, street carnival and traditional religious celebrations that project the unique features of the city all over the world.

LANDSCAPE PROTECTION

Measures to protect the cultural landscape of the city of Rio de Janeiro have been adopted since the 19th century, at the start of expropriation of lands containing streams used for water supply in the city and respective springs (Law no. 1114 of September 27, 1860) and the creation of Tijuca and Paineiras Forests (Decision No. 57, Directive of December 11, 1861), both issued by the State Secretariat of Agriculture Business, Trade and Public Works. In continuity with protective actions, farms in areas located in Tijuca and Paineiras Forests were expropriated in 1866.

The National Policy for Protection and Preservation of Brazilian Assets is ensured by two chapters of the Brazilian Constitution: Education, Culture and Sports; and the Environment. The chapter dealing with culture establishes that "the Brazilian cultural heritage is constituted of material and immaterial assets, individually or collectively, which are references of identity, action, and memory of different groups that constitute Brazilian society." The chapter dealing with the Environment addresses the preservation of nature from a biological standpoint, and assumes the legal and administrative responsibility for the preservation and restoration of critical ecological processes, for biodiversity and genetic heritage integrity, as well as for preservation units.

The city of Rio de Janeiro stands out in the national scenario for having one of the most extensive lists of protected areas in the country, in cultural and environmental terms, given the importance and significance of the cultural landscape. Protections based on heritage and environment laws are added to the urbanization law. Given the technical commitment to respect to landscape, by maintaining a balance in the city-nature relation, the urbanization law has tried to correct mistakes detected over the recent years, such as the release of gauges in some areas. The Master Plan was approved in 2011 when it already included the concept of landscape, and it highlighted among the principles of urban policy the "respect and protection of the environment,

landscape and natural and cultural heritage in the urban development process.”

THE DESIGN OF THE GLOBAL MANAGEMENT PLAN

Currently being discussed by the Managing Committee for Rio de Janeiro Candidature to World Heritage established by Iphan in December 2011, the Global Management Plan is scheduled to be completed in October 2013. The plan is based on cultural and environmental sustainability strategies to promote:

- Society’s awareness of the importance of heritage preservation as a cultural monument and the identity of Rio de Janeiro;
- The improvement of the planning and management instruments of the Site elements, with a focus on the territorial view based on existing sector-related plans;
- The application of such instruments to the integrated management of the Site, involving the three governmental spheres, private partners and society.

Shared management actions are being structured on four levels: institutional, regulatory, technical-operational and economic-financial. Once the territorial unit including the Site elements is determined, the shared management structure shall be established with an entity to support the Managing Committee’s tasks, constituted by the Advisory Board.

At regulatory and technical-operational levels, share management will ensure the institution of new regulations for the site protection and management adjustable to the existing law. At economic-financial level, the Fund for Preservation of Rio World Heritage Site should be established.

Day by day, the sense that Rio de Janeiro’s Cultural Landscape is truly a World Heritage becomes stronger because of the pioneering implantation of its urban landscape, social-cultural-environment functionality, and its cultural and historical importance. Setting up a cultural landscape protection and management policy bounded by the candidature by using the territory view and its correlation with the sustainable development will serve as an example for the several exceptional urban landscapes existing in the world.





article

INTERNATIONAL RIO: FACING THE CHALLENGES OF BEING SUSTAINABLE

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ABSTRACT

Driven by the positive state of affairs in Brazil, through the implementation of public policies and the development of the economy, Rio de Janeiro is experiencing a moment of optimism. The article presents data on the current situation, the targets and initiatives planned until 2016, with regards to developing a city sustainably, to meet the international standards.

8 CURRENT SCENARIO

The city of Rio de Janeiro is presently undergoing a period that has not been experienced for many decades. Driven by Brazil's positive circumstances, by the implementation of public policies and by the development of the economy, the city is recovering the brilliance of its golden years, and the repercussion in its international image can already be noticed.

In its history Rio de Janeiro has undergone periods of major prosperity, when it was the capital of the country during the period of the Empire and Republic, up to the beginning of the 1960s, when Brasília was inaugurated. However, with the accelerated growth of population in the 20th Century, combined with the intense urbanization and the fragmented public policies, up to the 1990s decade, a difficult state of affairs developed, causing the city to show a significant drop in its share of national GDP, leading to increased rates of violence and disorderly land occupation. Thus according to the UNDP, in 1991 the best-rated region of Rio de Janeiro showed a very high HDI, of 0.899, comparable to countries like Japan or Denmark. While the worst-rated region showed only a median HDI, of 0.657, comparable to countries like Mongolia or Paraguay.

As from that moment, however, there was a change in the focus of the public policies of the city and the results, which were intensified by the positive Brazilian state of affairs, began to be felt, principally in the last ten years. According to PME/IBGE (Monthly Employment Survey)/(Brazilian Institute for Geography and Statistics) data, in the period 2003 to 2010 the principal metropolitan areas of Brazil showed growth of 19% in their average income, while the city of Rio de Janeiro showed growth of 29%. This difference appears much more intense if one considers only the period 2008 to 2010, when growth was of 74.7% over the average. According to the survey, the total number of employed people also grew in the period.

According to a report by the Extraordinary Development Office of the Municipal Government of Rio de Janeiro, among the sectors that drive the strengthening of the Rio economy were the Mineral

Extraction, Steel, Naval and Civil Construction industries. These sectors are concentrated in the city of Rio de Janeiro and have a special importance in the Brazilian economy. Furthermore, they include the two largest companies in Brazil and are also responsible for increasing the relevance of the areas of Engineering and Civil Construction in the city.

Other less obvious sectors have been gaining in strength, according to municipal government data, with particular mention for the creative economy, which in 2009 employed 14.9% of the workforce of the city and includes sectors such as fashion, media and entertainment. Although the sector still represents a modest percentage of the economy of the city, Rio de Janeiro takes second place in the country for jobs in this area.

As decisive as the development of the economy was the investment in the areas of housing, security and infrastructure. These areas present major complexity not only in Rio de Janeiro, but in all of the large cities. However, in Rio de Janeiro, they are among the principal difficulties.

In this context, the promising period is also used to strengthen the image of the city as an international business center. The Rio Investments Promotion Agency (Rio Negócios) was created by the City Government in 2010 with the purpose of promoting and stimulating the commercial and economical potential of the city. The intention is of creating a virtuous cycle, in which public investments stimulate private investments and vice versa. Initiatives such as this have already produced fruits, leading to the city to occupying in 2010 fourth place in the world in terms of direct foreign investments, with growth of 600% in relation to 2009.

International repercussions have also been becoming present in other ways. In recent years it has not been difficult to find mentions to the city in major media with international circulation. The British magazine *The Economist*¹, for example, highlighted the development of the city, showing its social improvements and its strengthening as a place that is favorable for business. Recently Rio de Janeiro also received Investment Grade from three international agencies, Standard&Poor's, Fitch and Moody's.

¹ *The Economist* articles: *Doing Business in Brazil: Rio or Sao Paulo?* – 08/24/2011, *Education in Brazil: Rio's ace up it sleeve* – 09/01/2011, *Gávea Investimentos: A shore thing* – 04/14/2012.

TABLE 1
INCOME OF OCCUPIED PERSONS IN THE METROPOLITAN REGIONS AND
THE RIO DE JANEIRO

METROPOLITAN REGION	2003 (R\$)	2008 (R\$)	2010 (R\$)	VARIANCE % 2010 /2003	VARIANCE % 2010 /2008
RECIFE - PE	901,62	962,12	1.066,93	18%	11%
SALVADOR - BA	998,73	1.149,57	1.242,56	24%	8%
BELO HORIZONTE - MG	1.115,32	1.282,91	1.410,46	27%	10%
CIDADE DO RJ	1.516,05	1.740,70	1.954,97	29%	12%
SÃO PAULO - SP	1.455,98	1.589,08	1.646,24	13%	4%
PORTO ALEGRE - RS	1.197,56	1.314,43	1.464,56	22%	11%
AREAS TOTAL - PME	1.272,82	1.415,11	1.514,81	19%	7%

SOURCE: PME / IBGE DATA - COLLECTION OF RIO STUDIES - CHARACTERISTICS AND RECENT EVOLUTION OF EMPLOYMENT AND OF THE RIO AND METROPOLITAN ECONOMY - APR./2011

TABLE 2
(PERCENT (%)) VARIANCE OF FORMAL EMPLOYMENT BY SECTOR OF ACTIVITY IN THE CITY
OF RIO DE JANEIRO, OTHER CAPITAL CITIES OF THE SE AND OF THE ENTIRE COUNTRY, FROM
2000 TO 2009.

CAPITAL CITIES	FARMING	MINERAL EXTRACTION	TRANSFORMATION IND.	SIUP	CIVIL CONSTRUCTION	COMMERCE	SERVICES	PUBLIC ADM.	TOTAL
RIO DE JANEIRO	-2,7%	809,6	8,0%	12,9%	103,2%	40,1%	28,8%	15,4%	28,8%
BELO HORIZONTE	-20,4%	142,2	20,1%	33,7%	75,7%	53,2%	-1,3%	218,8%	40,3%
VITÓRIA	35,1%	62,2	38,1%	101,4%	51,5%	39,7%	74,3%	31,6%	51,4%
SÃO PAULO	30,2%	54,6%	14,3%	11,0%	72,1%	62,5%	69,2%	8,4%	43,9%
TOTAL SE CAPITALS	2,1%	314,2%	13,7%	18,6%	78,6%	54,2%	42,3%	28,4%	39,2%
TOTAL CAPITALS OF THE COUNTRY	-4,1%	241,0%	26,5%	23,8%	87,9%	64,7%	49,4%	25,7%	43,6%
BRAZIL	33,1%	90,5%	50,7%	32,7%	94,8%	80,9%	53,2%	49,0%	57,1%

SOURCE: COLLECTION OF RIO STUDIES - CHARACTERISTICS AND RECENT EVOLUTION OF EMPLOYMENT AND OF THE RIO AND METROPOLITAN ECONOMY - APR./2001 - MUNICIPAL GOVERNMENT OF THE CITY OF RIO DE JANEIRO

TABLE 3
FOREIGN INVESTMENTS

CIDADE	INVESTMENT (USD B)	VARIANCE % 2010/2009
GLADSTONE (AUS)	16	3101%
SINGAPORE	12,98	55%
SHANGAI (CHINA)	8,37	1%
RIO DE JANEIRO (BR)	7,27	600%
CIENFUEGOS (CUB)	5,8	N/A
SÃO PAULO (BR)	2,73	189%

FONTE: RIO NEGÓCIOS - ANNUAL REPORT 2010/2011 - FDI INVESTMENTS (2010)

Other data that reflect the trend are the increase in the number of foreigners residing in the city², the largest in Brazil, the attractiveness for tourists and even the number of international students, which has also increased in recent years.

Figures like these are certainly a reflection of the designation of the city as host for important international events. Rio + 20 in 2012, the World Youth Pilgrimage in 2013, the Olympic Games in 2016 and its participation as one of the host cities for the 2014 World Cup, ensure the frequent international exposure of Rio, representing recognition of its potential and a major opportunity of strengthening in the internal scenario.

Another outstanding area of recent progress is the environment. In addition to the undeniable relationship of the city with Nature, Rio de Janeiro has been showing concern in developing in a sustainable way. In recent years the city and its surroundings have been showing growth of the car fleet and in the emission of greenhouse gases. In response to this trend, the city recently presented a reforestation plan and was one of the first cities to define Climatic Changes policies, in addition to investing strongly in the extension of its bicycle traffic lane.

INVESTMENTS FOR THE COMING YEARS

In order to be successful in its targets and events of international exhibition, the city of Rio de Janeiro relies on many projects for the coming years, which have been integrated with the needs for investments that were ascertained, with the purpose of providing a legacy for the city. It was thinking about this that led the City Government of Rio de Janeiro to develop a Strategic Plan for the year 2016, in which the targets and initiatives for a number of areas of development were defined.

The vision of future for the city is very bold and provides on actions for the social, economic, political and sustainable development fields. Rio de Janeiro aims to be the capital city with the best indices of public education and health in Brazil, a

national reference in public management and an international reference for the energy industry, sustainable transportation and tourism in the Southern hemisphere.

In order to meet this objective, targets were defined and initiatives were grouped in the following areas: education; health; transportation; housing; public order; public management; sustainability; culture; economic and social development.

In the area of sustainability, for example, the Rio Sustainable Capital initiative consists of turning the city into a world reference in the area. For this, it is planned to implement policies on climate change; to publish the GRI (Global Report Initiative) report; to make the City Government become eco-efficient; to collect 25% of all of the city's recyclable waste; and to reduce by 16% the emission of gases that cause the greenhouse effect by 2016.

In parallel, there is also the objective of turning Rio into the Capital of Tourism and of Energy. These initiatives are connected to the economic development of the city and aim at attracting more investments and improving the infrastructure. Presently, these are already the outstanding areas of the economy of the city, but so that they can be intensified and consolidated in the international scenario, it is necessary to expand them and enhance certain aspects.

In the area of infrastructure, the highlights are some major projects, like the Olympic City, the Marvelous Port and the BRT (Bus Rapid Transit) Express Corridors, inspired by the project implemented in Curitiba. It must be stressed that the projects of the Marvelous Port and of the Olympic Park are being carried out by means of Private-Public Partnerships, which tend to intensify in the coming years.

In other areas one must mention the educational, health and social development projects. The first two were expanded with an increase of investments in the city, in addition to a number of initiatives. Among them one highlight is the Rio Global, which will intensify the teaching of the English language in the public schools network, and the Rio Forma

² The city occupies the 1st position in the ranking of foreigners residing in Brazil – of the work visas granted in the country in 2010, 46% were for Rio.

Olímpica, which works on encouraging sports in schools of the more needy areas. These projects show the synergy between the various areas and will lead to major benefits in the medium term, showing the synergy between the various areas and the thought of a globalized Rio.

INTERNATIONAL SUSTAINABLE CITIES

Presently, with a major portion of the world population concentrated in urban centers and the general attention aimed at sustainable development, the “sustainable cities” theme has become one of the major paradigms of the modern world. In itself, this seems to be a contradictory situation, since it requires equilibrium of the conflicting aspects, with the major cities being some of the areas in which one lives in the least sustainable way.

In this context, the global cities have been developing strategic plans to face these challenges, since this measure becomes necessary to maintain the competitiveness and attractiveness of each region. Even if a city presents different complexities and levels of development, their challenges and principally their targets are common.

According to a report by the World Bank, a sustainable city must be at the frontier of four principal aspects: management, competitiveness, finance and quality of life.

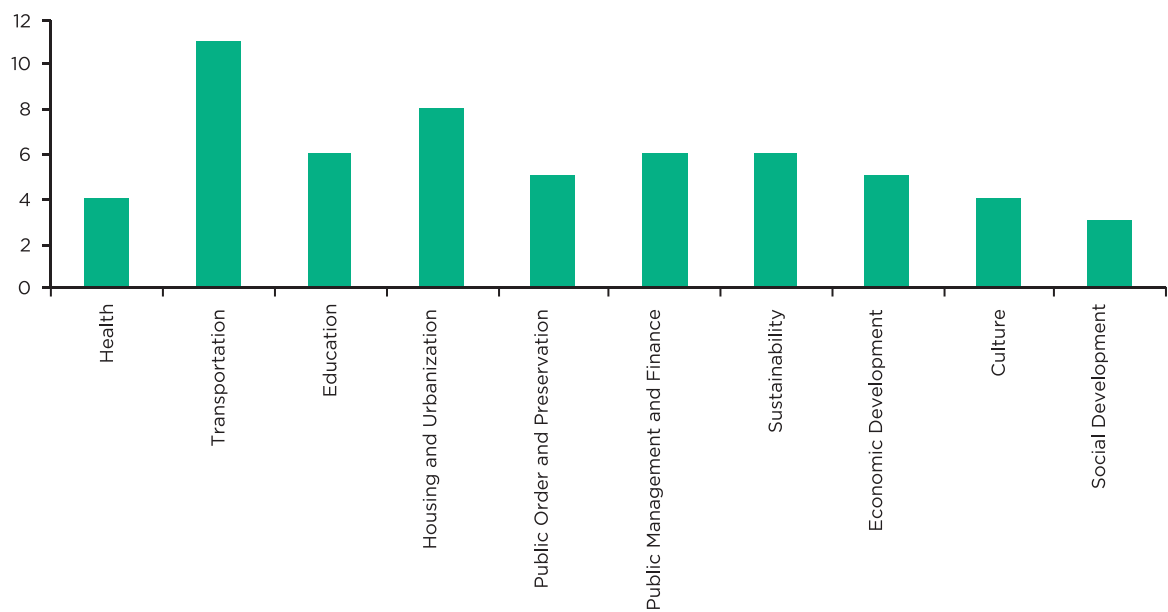
In addition to these, other aspects are listed as being important for the monitoring of a sustainable city³:

- Quality of the water and of its supply;
- Access to fresh foodstuffs;
- Handling of solid waste, including recycling and organic compost rates;
- Access to parks and outdoor sites;
- Quality of the air;
- Access to education;
- Health and services for the family;
- Supply of energy, including the quantity and types of renewable energy;
- Growth of the green economy, including products, jobs and services;
- Accessible housing prices;
- Orderly expansion;
- Urban soil footprint;
- Urban ecological footprint;
- Access to public transport.



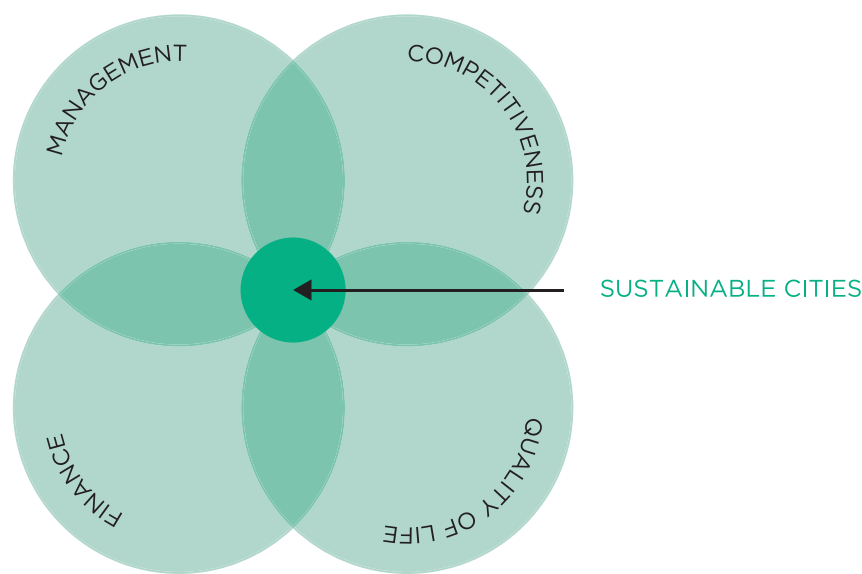
³ Shanghai Manual – A Guide for Sustainable Urban Development in the 21st Century – United Nations, Bureau International des Expositions (2010)

92 NUMBER OF INITIATIVES PLANNED BY AREAS IN THE RIO DE JANEIRO STRATEGIC PLAN - 2016



SOURCE: DRAFTING FGV PROJECTS

FIGURE 1
CHARACTERISTICS FOR A SUSTAINABLE CITY



SOURCE: WORLD BANK

In order to face some of these challenges, Mexico City, for example, developed the “Green Plan”, which came principally from the intention of improving the quality of air in the city, which two decades ago was the worst in the world. However, the plan acted in a number of areas that at first sight did not seem to have any relation with air pollution. Among them were the use of the soil, the handling of solid waste, transportation and climatic changes. This experience shows that integrated action in a number of sectors can be necessary and can provide an improvement both for the principal point addressed initially, and indirectly for other related aspects. The city reduced air pollution considerably and indirectly improved the supply of water, public transportation and traffic.

Another example is the city of New York, which presented “PlanNYC 30”, publicized in 2007 and developed together with the population. Presently, the plan relies on 132 initiatives and 400 targets. The focus is of making the city more sustainable, preparing it to take in 1 million new residents, strengthen the economy, increase the quality of life of its residents and combat climate change. One of the greatest challenges encountered is in the area of housing, which should be accessible to everyone. It is desired also to guarantee access for all of its inhabitants to parks within 10 minutes from their homes, in addition to making buildings sustainable, increasing the quality of the air and excelling in the sustainability indices.

Using these examples, it can be perceived that the large cities present a dynamic environment with constant challenges. Even a city like Stockholm, which already presents a high level of development and was actually elected as the first green capital in Europe in 2010, faces challenges.

At this present moment, the principal objectives of the city are integration and sustainability. According to its strategic planning, the target is that all of the regions of the city be equally attractive and that all of its inhabitants, of different cultures, can integrate and provide cultural wealth for the city. In addition, Stockholm continually seeks to offer top quality events and a dynamic and creative atmosphere, in order to maintain its attractiveness. With this purpose, museums, a design center and

an arena in partnership with the private sector were constructed. In relation to the environment, the city wishes to ensure and increase its sustainability. For this it has developed a number of initiatives related to efficient use of energy and water, ecologically-efficient transportation, products and buildings free of toxic substances, and also plans to be a city free of fossil fuels by 2050.

RIO SUSTAINABLE CITY CHALLENGE

Observando os exemplos globais, percebe-se que When observing the global examples, it is perceived that the challenges not only surround Rio de Janeiro, but all of the large cities. It is clear that, in order to maintain the competitiveness and the quality of life of its inhabitants, constant efforts and planning are required.

Presently, one may consider that the principal challenges faced by Rio de Janeiro are common to all of the major Brazilian cities: a lag in infrastructure, particularly with regards to sustainable urban mobility; quality housing for everyone; and public security. These areas have received the greatest investments in the last decade, but they still appear as very challenging.

In recent years much has been accomplished in relation to security in Rio, with all of the principal actions being conducted by the State Government. In addition, there is an important plan for modernization of the municipal police, highlighting the essential task that has been carried out to sustain the actions of the State, with the implementation of social programs in the UPPs (Pacifying Police Units). However, this is only a good beginning for the major challenges, according to a survey by FGV Projetos (N 18 – 1/2012), in which the interviewees, despite valuing the actions that are being implemented, still feel very insecure about the situation. According to the survey, security is also considered to be a considerably negative point in the image of the city, a fact that can be verified when noting that, among the points of negative assessment recorded by international tourists travelling to Brazil, security shows significant relevance.

Another important issue is accessibility to housing. To this date there is still a large contrast between the regions of Rio. In the more prestigious and valued areas, the price of real estate has become very high. To provide similar quality of life to the inhabitants of various regions of the city would certainly be a reducing factor to this trend.

In addition to the mentioned challenges, each city also presents a wide array of opportunities to be worked on. An interesting focus is the investment in the creative, sports and tourism economy, factors that are related to the construction of a sustainable, innovative city of international prominence. In relation to tourism, it would be important to encourage the practice of sustainable tourism, so that it can be a beneficial activity for the entire population and can also strengthen the image of the city in these aspects.

In addition to these areas, the integrated investment in all of the relevant aspects for a sustainable city certainly will be of major importance for affirming of the international image of Rio. A sustainable city implies well-balanced and cohesive investments among the social, economic and environmental aspects.

CONCLUSIONS

As can be observed, the concepts of sustainable and global cities are being considerably interrelated. The

parameters of sustainable development blend with those that will attract people and the quality of life of a city, and economic development must increasingly take into account the environment, actually making it an ally. Presently, this is the route followed by the principal cities of the world.

In this sense, the challenges of affirming the Rio trademark as a global and sustainable city are not few, but certainly this is the opportune moment to face them. Taking advantage of its natural areas of competitive edge, with their growing appreciation and economic importance, the opportunities are very promising.

As benefits, Rio de Janeiro is surrounded by privileged natural beauties, which make up its post cards and make Rio citizens to be more likely to develop a relationship with Nature and practice sports. In addition, the diversity of Brazilian and Rio cultures causes the city to present unique characteristics that can be very attractive internationally.

Recently the city has already stood out in certain areas, but it must follow the plans presented to recover the lag of others and effectively attain a level of comprehensive and integrated development. If these requisites are fulfilled, Rio has everything to stand out and affirm itself as a model of sustainable city for the world.





article

RIO + 20 AND SUSTAINABLE TOURISM

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ABSTRACT

The growing concern with sustainability can be noticed by the continuous presence of the theme in political, corporate and academic debates at global level. The article speaks of the relation between tourism and sustainability, especially in the context of holding large events like the Rio + 20 Conference. According to Luiz Gustavo Barbosa, it is an opportunity to promote the city as a sustainable tourist destination, which requires the commitment and participation of entrepreneurs and management of the area.

The growing concern with sustainability is felt by the constant presence of this topic in public and corporate debates, and within the academic environment, at a worldwide level. Sustainability gained notoriety 20 years ago, at the United Nations Conference on Environment and Development, better known as the Earth Summit of 1992 (ECO 92), an event that uniquely joined together several world leaders in the City of Rio de Janeiro, with the purpose of setting the guidelines for sustainable development. At was at this event that the concept of sustainability was in fact consolidated, driven by the search for a development that meets the needs of present generations, without compromising future generations. The document produced on that occasion, the Agenda 21, sealed the nations' commitment with the search for a form of sustainable development, involving public participation.

Within this scenario, reference should be made to the main events that made sustainability into one of the primary concerns of the tourism industry. During the Earth Summit of 1992, Sustainable Tourism gained notoriety, with the establishment of the concept that anticipates the development of tourism destinations in view of the social and economic benefits to the host countries, and the preservation of the cultural and ecological integrity of the destinations.

Please note, further, that at that same time, the concept of Ecotourism was also consolidated, which is a segment defined by the use of the natural and cultural heritage, albeit including an incentive toward its preservation and valuation, so as to promote an environmental awareness through the interpretation of the environment, thus assuring sustainability and social wellbeing. It is within this segment that we observe, more clearly, the sustainable practices adopted within the sector. However, please note that the concept of Sustainable Tourism intends to serve as a premise for the development of any segment of tourism, rather than merely Ecotourism.

The commitment assumed by the tourism industry with sustainability was also executed with Agenda 21, prepared in 1998 by the World Tourism Organization, to establish the companies' commitment with the preservation of the natural, cultural and social resources, which are at the foundation of the activity.

In Brazil, with the institution of the Ministry

of Tourism, in January 2003, the country's commitment with the sustainable development of the sector was reinforced. The body's mission is to develop tourism as a sustainable economic activity, which plays a crucial role in the generation of jobs and income, enabling social inclusion. The concern with the sustainable development of tourism has been present in all of the National Plans for Tourism conceived by the Brazilian Ministry of Tourism, being included both in the debates and in the premises for the implementation of public policies pertaining to the sector.

After this long path trailed by the tourism industry and considering the upcoming United Nations Conference on Sustainable Development, known as Rio + 20, to be held in June of this year, we will have the opportunity to rethink and redefine the agenda of sustainable development for the next decades. With the purpose of renewing the commitment with sustainable development, the 2012 edition of the event will defend public participation as a crucial element for the achievement of this goal. The presence of several world leaders, to focus on the discussions concerning the directions to be followed by the planet to reach sustainability, should be viewed as a chance to effectively include the concerns with social development and environmental protection in the current model of economic development.

Rio de Janeiro is known throughout the world for the unique beauty of its landscapes, its cultural diversity and the warmth of its people. The advancements made in the Brazilian economy and the country's increased participation in the worldwide political discussions have increasingly expanded the country's visibility, and, consequently, the visibility of Rio de Janeiro, as one of the main tourism destinations in the world. The city has hosted important international events, and the upcoming World Cup of Soccer of 2014 and the Olympic Games of 2016 are already generating a number of opportunities for Rio.

The effects of the opportunity to host these major events are already palpable: the city has received investments in its transportation infrastructure – expressways for buses, new subway lines, and the renovation of its airports – and in the hotel industry, in addition to the increased number of foreign tourists, also reflecting on the ship cruises

season. The “Porto Maravilha” [Marvelous Port] Project anticipates the revitalization of the harbor area, transforming the location into a point of reference for culture and entertainment, following in the footsteps of cities such as Barcelona, Buenos Aires and Belém, which managed to transform deteriorated spaces into tourism destinations.

This unique moment in the City’s history will bring improvements not only to the State’s capital city, but also to other cities in the State, which are preparing to receive sports delegations at their training centers during the World Cup of 2014. This way, the possibilities of development extend beyond the local borders, to attain regional status. The investments that are currently being made to prepare Rio de Janeiro to host these major events are expected to bring improvements in the local citizen’s quality of life, by increasing job opportunities, improving the public transportation system and public safety, not to mention the traditional legacy left by sports events: numerous high quality sports venues, which can be used to promote the practice of sports by children and youngsters, as well as the general population.

This moment of substantial investments and media exposure of Rio de Janeiro afford a good opportunity for the city’s acknowledgment as a sustainable tourism destination, which will require the commitment and cooperation of tourism administrators and entrepreneurs with these issues. To this end, certain actions may be prioritized, such as the adoption of sustainable criteria in the construction and renovations of tourism enterprises and urban projects, in addition to the investment in professional qualification and in the certification of companies.

The successful hosting of the World Cup and Olympic Games, combined with the spontaneous media generated on account of the events hosted, will attract and captivate more and more tourists to the Marvelous City, while the improvements made tend to contribute to the satisfaction of those visitors. The growing number of tourists, in turn, might generate, as a result, an increase of consumption, which will likely heat up the economy and the production chain of the tourism industry. Consequently, the axioms of sustainability may be affected by the boost in income and the enhanced wellbeing of the local community, in addition to the valuation of the environmental, cultural and landscaping heritage, thus improving the residents’ quality of life.

The achievement of sustainability in the tourism segment will require the acknowledgment of the importance of planning and the use of performance indicators capable of monitoring the impacts of the activity on the economy, the environment, culture and society. Besides improving its management capacity, any tourism destination that wishes to be acknowledged as a sustainable destination will have to efficiently communicate its differential to the market, after it has adopted the technologies to minimize environmental impacts and expand the social benefits.

Within this scenario, the fact that Rio de Janeiro is hosting Rio + 20 assigns an even greater responsibility to the city concerning this topic. So, the appropriate conditions are created to enable investments in the tourism industry, which emerges as an important route toward sustainable development.

In light of the current moment, just before the hosting of major sporting events, the concern with the hiring of companies and suppliers committed with social and environmental responsibility, and the requirement of environmental impact studies, are important actions to ensure social and economic development and avoid the negative effects that might result from the misguided exploitation of the city’s resources.

To work in favor of the adoption of environmentally-friendly practices – such as rational use of water, energy efficiency, recycling of waste, and carbon neutralization –, promoting social responsibility, respecting the local communities, accessibility and the inclusion of disabled citizens, and protecting childhood and adolescence emerge as challenges to be overcome, so that tourism is sustainable for generations to come, promoting social and economic development for the environment in which it is inserted.

The expectation is that Rio + 20 will result in concrete decisions and set goals to ensure that the countries and cities will commit to responsible development, and that the city of Rio de Janeiro will be capable of using the opportunities well and leveraging the tourism industry in a sustainable manner, so as to preserve its image and truly turn into a Marvelous City.



article

SUSTAINABLE DEVELOPMENT AND TOURISM

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ABSTRACT

One of the major challenges of sustainable development is its implementation. In his article, professor Jonathan Speier presents some of the main concepts of sustainable development and a model of its application in tourism.

MOVING TOWARDS SUSTAINABLE DEVELOPMENT

In recent decades, the prospects for sustainable development have tried to integrate governmental institutions, as well as effective institutions in the free market, embracing both the State and the market, as complementary, rather than oppose them as mutually exclusive alternatives. In addition to addressing the desired goals in order to address economic challenges, it was concluded that natural resources and the environment imposed limits on economic development. According to Agenda 21, it was anticipated that the integration of the environment and development would lead to the satisfaction of basic needs, improved living standards for all, better protected and better managed ecosystems, and a safer and more prosperous future.

Agenda 21 also recognized that to achieve permanent improvements of quality of life in the long run, it would be necessary to tackle social and human challenges, to be aware of the uniqueness of the local culture of each country, and promote intersectorial collaboration and participation of the beneficiaries in the decision process.

The practice and theory of development have expanded, besides achieving economic goals of income and growth through investments and trade, to incorporate the eradication of poverty and a more balanced distribution of income, by creating productive employment and business generated locally. Basic social services (such as health and nutrition, education and housing) have become prerequisites for the long-term development of the economy, as well as improved institutions, organizations with social and political inclusion, and respect for human rights and fundamental democratic freedom.

APPLYING SUSTAINABLE DEVELOPMENT TO TOURISM

Compared to other forms of development, such as mining, production or manufacturing, it is believed that tourism provides certain features that may be combined in a unique way, offering opportunities for achieving sustainable development. Tourism is seen as a relatively clean and renewable alternative for the environment, having a symbiotic relationship with the ecosystems on which it depends for its viability. It has been promoted as an industry without a chimney



for using free resources (sun, sea, sand, for example), historical, social and cultural wealth that are typically abundant in developing countries.

Due to the nature of tourism of directing people to a destination, the host population becomes an active participating agent, and not merely a productive input as occurs in other industries. Its maximum objective and its driving force are to positively impact social and human development of the local population, providing a healthy and productive life in harmony with nature, now and for future generations. A fundamental way to achieve this greater purpose is to invest in the training of the population.

Active participation of the host population and the adaptation in the processes of the development of local culture involve the use of its many talents and experiences, interactions and collaborations of their social and economic networks and existing policies. There is a greater emphasis on collaboration, self-organization and self-management among the various groups, and the expansion of the networks through which they must interact. In other words, individuals, associations and organizations, working together in a local idiosyncratic institutional context, can identify, with a greater degree of success the

strategies and changes needed to achieve the kind of development desired by the local community.

ANALYZE, PLAN AND OPERATIONALIZE THE SUSTAINABLE DEVELOPMENT OF TOURISM

The recognition of the importance of tourism as an option for sustainable development, in this article a model will be presented that has been used successfully, both in practice and as a research tool to analyze, plan and operationalize the sustainable development of Tourism. The model includes the expansion of the objectives to incorporate social, human and economic development, respecting at the same time, the uniqueness of each native culture and the limits imposed by the environment and natural resources, recognizing the role of effective governance and efficient institutions and organizations.

The five dimensions are shown above and consist of specific indicators, drawn from numerous sources in literature, in practice, case studies and from international organizations.



1. The Social and Human Dimension of Tourism

The way that tourism has expanded to involve people who feel the impact of developmental efforts, this first dimension of sustainable tourism will gradually become relevant. Its positive impact indicators include health, nutrition, sanitation, access to drinking water, along with education, literacy and training, by facilitating the empowerment of individuals and their communities by participating in decisions that affect their lives and their development choices.

However, there is also a series of negative social indicators when host populations are exposed to the uncontrolled growth of the development of tourism seeking economic rewards in the short term. One of the most significant potentially negative social indicators is the deterioration of moral standards, as well as the safety and health of the local population. Sometimes the people are victims of a number of social ills such as prostitution and child exploitation, and an increase in sexually transmitted diseases, crime and illegal activities.

2. The Economic Dimension of Tourism

Traditionally, the economic dimension has been considered as the most important development. In the area of tourism, some economic indicators have the unique potential to combine to stimulate the local, national and regional development, as well as diversify and expand the economy. The generation of domestic and foreign capital, public taxes and private business activity, employment and investments in various industries are examples of potentially positive indicators.

The multiplier effect, linking production to the tourism services in other areas, stimulates the economy in general and brings benefits to local entrepreneurs to expand the participation of the formal and informal sectors, which offers a greater ability to create small and micro enterprises, which can generate jobs and benefit the population most in need.

Possible negative indicators include speculation, poor distribution of income, earnings volatility and inflationary pressures, when the spending of well-off tourists drive up local prices.

Finally, seasonal changes in tourism demands challenge the economies, as the number of visitors may change during the year. Moreover, the tourists preferences are unstable and change when new destinations are heavily promoted, often resulting in volatile earnings, unpredictable incomes and unsustainable levels of economic development.

3. The Environmental Dimension of Tourism

Public policies, private programs and initiatives to standardize the environment contribute to boost positive indicators, such as construction and environmentally sensitive development projects, planting trees, building parks, reforestation, recuperation of the plant area, selective collection services, sanitation and pollution clean-up programs that directly benefit the host community.

However, it has been reported that environmental degradation is the main cause of the decrease of tourism in a given destination, when the sustainable capacity of its natural and physical environments is exceeded, causing irreparable damage and, finally, the lack of visits by tourists. Furthermore, the increase in pollution and other environmental damage directly reduce the general welfare of the inhabitants.

4. The Cultural Dimension of Tourism

Similar to the limitations imposed by the natural environment, the development of tourism is also limited to the capacity of the local cultural environment to absorb new developments in this area. The sustainable development of tourism should be planned and managed in such a way that helps to preserve and maintain the cultural heritage and traditions as well as promoting the dignity of the local society.

However, unrestricted growth in the development of the tourism sector, focused on immediate economic gains, can disrupt or degrade cultural values and traditions. There is a risk that the authenticity of cultural traditions is lost, as they become marketed to entertain tourists.

Conflicts can arise when the behavior of the visitor differs substantially from the behavior of the local population. For example, individual tourists, in their selfish pursuit of pleasure, are sometimes aggressive, flamboyant and promiscuous, which

can lead to jealousy and resentment among the local population. Another possible source of conflict arises when a city builds cultural elements to attract and encourage tourists, such as opulent and huge museums, insensitive to the needs of the inhabitants who cannot afford a visit to these places.

5. The Dimension of Institutions and Tourism Processes

The objectives of the four dimensions mentioned above can be achieved more readily if we add the fifth dimension, i.e., institutions and tourism processes, to increase the involvement of multiple actors in collaborative actions with the aim of achieving the economic, social and human goals of sustainable development. Leadership in the public sector at a local, regional and national level, besides public support policies, has been increasingly crucial in participatory initiatives of the public, private and non-governmental sectors.

However, in practice, historical records suggest that attempts to incorporate actors are often insincere and exclude people from a lower socioeconomic level of the deliberation processes. In some cases, the lack of coordination of the actions between different sectors has negative consequences for the environment, economy and way of life.

OLYMPIC CITY (CIDADE OLÍMPICA) AND SUSTAINABLE TOURISM

We use the model presented in this article, with the five dimensions of sustainable development of tourism and their indicators to examine some of the potential effects and expected legacy in the transformation of Rio de Janeiro into a Marvelous Olympic City.

The Olympic and Paralympic Games are often cited as major catalysts of tourist activities, as can be seen by the significant increase in the number of tourists in Atlanta, Sydney, Athens and Barcelona after they hosted the Games. Barcelona became the most visited city in Europe after Paris.

As the host city for the Olympic and Paralympic Games in 2016, Rio de Janeiro will be highly

visible at a national and global level, taking the opportunity to perpetuate the tradition of attracting thousands of domestic and international tourists, not only during, but especially after the event.

Based on surveys and studies, it is possible to identify several things that have the potential to provide the city with positive or negative effects in the dimension of social and human development, although it anticipates a greater number of positive ones.

First, the new physical infrastructure projects that interconnect the Olympic centers, such as the four new express lanes for buses and the Light Rail Vehicle system, will be integrated with other modes of mass transit, new or that already exist (airports, subways, trains and ferries), stimulating and facilitating the mobility of people.

Construction of the Olympic Port Project, in the harbor area, should be a key part of the reorganization and strengthening of urban port area, with the total rehabilitation of urban infrastructure, including sanitation, water supply, a telecommunication network based on fiber optics and the collection of solid waste, which will directly benefit current and future residents of the region, substantially improving their quality of life.

The various sports equipment and sporting infrastructure, including swimming pools and multi-sport court facilities for the public, will provide training centers for future Brazilian athletes, and bring social and educational progress, as well as improvements in health and the welfare of residents in general, and young people in particular.

Several regions in the surrounding areas with Olympic equipment, such as the Maracanã, will undergo a revival, by obtaining cycle tracks, fitness equipment, leisure centers, as well as programs for social housing and new residential units.

On the other hand, in relation to the dimension of social and human development, some challenges facing the city can be cited: the consternation experienced by residents in the areas of removal, the exclusion of the poorest people by harnessing the positive aspects of the items mentioned above, the sexual exploitation and use and trafficking of drugs, the disorder caused

by the urban transformations before the Games and the massive influx of visitors during the Games.

Studies on the predicted impacts on economic development in the country over the next 25 years from public and private investments of the Games estimate that the numbers could reach more than R\$ 35 billion, generating over 100,000 jobs per year. In the city of Rio de Janeiro, studies indicate that investments related to the Games not only have the intention to stimulate the development of tourism, but also offer numerous economic gain multipliers. There is a huge list of possible positive effects involving port and airport, sports facilities, hotel chains, leisure areas, reception agencies, bars and restaurants, transport companies and car rental companies, convention centers, residential and commercial areas, among many others.

It is worth noting that indications point to other Olympic cities that have suffered from rampant property speculation, and a suffocating public debt, inflationary pressures and the exclusion of a significant proportion of the population in participating in the economic growth and labor market, especially in the long term.

Several projects and initiatives are being considered or are in progress, considering the protection and improvement of environmental conditions. In this context, the positive indicators include: the use of sources of renewable energy, respect for the landscape in civil construction, reuse of material from demolitions, reforestation and restoration of vegetation, collecting and treating wastewater, reducing pollution in the Guanabara Bay and the Jacarepaguá lagoon system, sanitation of the River Marangá basin and expansion of the cycle route network and its integration with other forms of public transport.

It is believed that without the awareness, inclusion and collaboration of the population in these initiatives, it will be difficult for the city to get rid of the garbage from the streets, beaches, parks and other public areas, along with the rivers and sea waters that cause, as well as nuisances and floods, aesthetic, health and sanitation problems.

In the cultural dimension, there are several

projects that can boost tourist attractions during the Games, such as the preservation and enhancement of the cultural and historical demonstrations and the restoration of art and architectural heritage in various parts of the city, as well as the creation of new museums and cultural centers such as the Museum of Image and Sound, the Museum of Tomorrow and the Rio Art Museum. After the Games, the Athlete's Park will operate as a recreation and events area.

A negative indicator to be considered and, hopefully, eventually overcome, concerns the Rio residents lack of attending museums and cultural venues. This issue still seems to be worsened by the high prices of tickets to certain shows and cultural events. This challenge could be solved by, respectively, higher education and financial incentives, involving various sectors of civil society.

The fifth and final dimension of sustainable development of tourism, and institutional processes, includes the democratic participation and collaboration of all stakeholders which may influence or be influenced by decisions relevant to the changes arising from the Olympics. There are many positive indicators in this dimension, including the occurrence of hearings, meetings, conferences and debates, exemplified by the Meeting of the Local Clean Games Committee, Local Rio Committee, Rio Popular World Cup and Olympics Committee, the Special Committee for Mega Events of the Legislative Assembly of Rio de Janeiro, which includes NGOs, neighborhood associations, popular movements, organizations, researchers and other stakeholders to verify what is being planned for the mega-events in terms of compliance with the rights of the residents.

It is worth taking into account that the participatory democratic activities, as well as the interaction of the actors in the decision-making, are recent phenomenon in the history of the country, so the results of indicators of this dimension should be studied, recorded and monitored carefully.

Finally, the scope, depth and the mainstream integration of a complex group of social, economic, environmental, cultural and institutional

relationships make the sustainable development of tourism extraordinary in its potential to contribute as a vital force for promoting peace and cooperation among nations and the mutual understanding between people. A dynamic and competitive tourism industry, in turn, offers exciting and successive prospects for research, consulting, planning and the implementation of the five key dimensions for the sustainable development of tourism.





article

SLUM TOURISM: A SUSTAINABILITY CHALLENGE

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ABSTRACT

The issue of tourism in favelas (slum areas) is an international reality. The article presents the results of a research made in five favelas of Rio de Janeiro in order to enhance the knowledge on this innovative experience, gathering information and data that guide the implantation of tourism-oriented activities capable of generating employment and income in pacified favelas, besides developing a model action plan that permits the identification of potential for tourism and the structuring of some form of tourist activity in these communities.

The matter of slum tourism is an international reality. Despite the differences of opinion among those who disapprove of the contemplation of poverty and those who consider it a form of social inclusion, the visitation of slums has been developing in Rio de Janeiro, mainly in the slums that have already received the Pacifying Police Units (Unidades de Polícia Pacificadora, UPP). Precisely in this month of June, this activity completes 20 years: it was at the Earth Summit of 1992 (ECO 92) that, despite the efforts by the public authorities to keep the slums invisible to foreign eyes, the organized visits to the slums began, at the Rocinha “favela”.

And it is not only the number of travel agencies offering the tour that has grown, but also the number of groups taken each season. Meanwhile, the position of the three levels of government has shifted, which now view this mode of tourism as capable of promoting social and economic development within the slums.

The issue is consistent with the discussions surrounding green economy. According to the United Nations Environment Programme (UNEP), from the viewpoint of green economy, economic growth and environmental sustainability are not

incompatible. Green economy would generate jobs and economic progress, while avoiding considerable adverse risks, at the same time, such as the effects of climate change, greater shortage of water, and the loss of ecosystem services.

It was within this context that FGV Projetos conducted a study of the tourism activities developed in the slums of Rio de Janeiro, taking a deep look at the tourists’ impressions, the potentialities of the activities, as well as the hindrances¹.

Five Rio de Janeiro slums were investigated, with the gathering of information on offer (current and potential tourist attractions) and demand (tourist profile). Morro Santa Marta (in the Borough of Botafogo) was the pilot, used as the model to determine the profile of Brazilian and foreign visitors.

HERE COMES THE GRINGO...

It was noted that the tourist who visits the Santa Marta slum is, in the vast majority of the cases, foreign, young (aged between 25 and 34), well educated (61.4% have completed their higher

¹ Study conducted by order of the Ministry of Tourism, throughout the year of 2011.

education) and employed (47%). Contrary to what one might assume, students are not the majority, representing 18% of the visitors. Their monthly income is approximately R\$ 8.5 thousand and they are first-time visitors to Rio de Janeiro (85%). They usually travel as couples, in groups of tourists or in the company of friends, with the intention of enjoying the city's entertainment options.

In the international media, the image of Rio de Janeiro is frequently associated with violence. The representation of the slum is often ambiguous: while it is seen as a space of utter poverty and violence, as a rule, it is also seen as a venue of cultural expression (the birthplace of samba and funk) and solidarities preserved.

Approximately 57% of all tourists were unaware of the existence of differentiated police surveillance in the Santa Marta community, represented by the UPP. However, this new policing experience is well-known by 69.9% of all Latin-Americans, but by no more than 40% of the North-American and European tourists (with the exception of Eastern Europe). This information, especially if compared with the information in the preceding paragraph, offers evidence of a greater perception of insecurity among Latin-American and Eastern European tourists.

Generally, this information may be construed as an indication that the concern with safety is not a core concern for most of the tourists visiting the location, to the extent that they have a more positive than negative view of the venue.

On the other hand, a small minority of the tourists, who consider the city "extremely unsafe" (less than 5%), show a much greater tendency to seek information about the new policing method (only 22.2% were unfamiliar with it) and to qualify it as a relevant factor when deciding to visit the Santa Marta Slum.

An interesting fact is that, even though for the vast majority of the visitors the tour to the Santa Marta slum represents a new experience, more than half (55.4%) say that they know people who have visited slums before, even in other parts of the world. The tourists follow a clear trend of seeking in the prior experiences of their social relations information

to support their decision to make a paid visit to a slum. In this sense, it is not surprising that the main references have been relatives and friends (46.8%). It is the Latin-Americans who have had the most contact with other persons who have visited a slum (78.6%), while the tourists from the Middle East have had the least contact with such persons (28.6%). The tourists from other regions present, in this aspect, near average indicators.

MOTIVATION AND IMPRESSIONS

In spite of the accusations of voyeurism and exploitation of other people's misery against those who buy and sell the slum tours, the foreign tourists "strongly agree" that the primary motivation for the visitation is to learn different life styles. Another fair wager is on the ability that this form of tourism will bring economic development and social benefits to the location (adding the options "agrees" strongly and slightly), although the amount spent by the tourists at the slum has been negligible.

On the other hand, one of the most strongly rejected assertions was precisely in the sense that the agencies were profiting from the slum population's misery. In addition, another negative assertion, in the sense that the visits allegedly had an adverse effect on the residents' image, was also strongly denied by the foreign tourists visiting Santa Marta.

Finally, the two most controversial assertions referred to the evaluation of the behavior of the "other tourists" during the tour to the slum. In this aspect, the tourists presented a good individual reason to explain the visit to the slum, considering the positive effects on the community and the belief that the visitation did not tarnish the residents' image. On the other hand, they accused "the visitors" of disrespecting the privacy of the residents by taking photographs.

In terms of their expectations for the visit to the Santa Marta slum, the majority of the tourists expressed satisfaction with the tour, provided that 39.3% answered that the visit exceeded their expectations, while another 39.8% answered that the visit met their expectations in part. Only 5.2% expressed little or sheer dissatisfaction with the tour.

The best impressions the tourists had about the slum related to the location's architecture (55.9%) and the view of the city (41.1%), in addition to their introduction to the existing social projects (34.9%). As for the recognized importance and the relevance of the trade of products within the tourist destinations, only 36.6% of the foreign tourists bought anything during their visit and the expenditures were relatively minor.

Approximately 40.6% of the tourists that bought nothing indicated the lack of offer as one of the reasons they did not buy anything, noting, among other things, that no product was offered to them, or that they saw no shops during the visit. Besides, please note that 12.4% alleged lack of time. This might be an indication that the form in which the visitation is performed does not contribute toward the promotion of the local trade. The people observing the tour notice that, at the most important stops, like the Michael Jackson rooftop or the "Cantão" area, there is no infrastructure in place to enable the sale of products, such as arts and crafts and clothing.

Among the tourists interviewed, only 36.6% purchased anything, insofar as three fifths of them spent less than R\$ 5, with the purchase of items not directly produced by the residents of the

community, such as bottled water and beverages. Part of the problem identified by the tourists apparently resides in the low offer of products, but that is not the only factor. The lack of hygiene was mentioned by 11.1% of the visitors, which points to issues related to basic sanitation and cleanliness, which often discourage the consumption of products at the slum, especially food and drinks.

DO THOSE WHO HAVE NOT SEEN IT WANT TO?

In order to minimize possible opinion trends, tourists who did not visit slums were also interviewed. The subjects were approached at the city's points of arrival and departure.

Considering the sample, approximately 47% of the tourists interviewed at the airport had never heard of tours to the slums. However, as would be expected, this proportion is much more expressive among foreign tourists (63.3%), than among Brazilian tourists (36.7%).

For Brazilian and foreign tourists alike, poverty, shabby housing and drug trafficking are the three main things that they would expect to see during the visitation to the slum. This was followed by one more



negative characteristic noted: uncleanness by the Brazilians and disorganization by the foreigners. So, we find that the slum is predominantly associated with negative perceptions, so much so that its positive characteristics are only referenced with greater stature in the fifth position: solidarity, joy and samba.

We did find a similar pattern of answers among the two tourist profiles (Brazilians and foreigners who did not visit the slum), provided that one of the answers that resulted in the greatest level of agreement stated that “the main motivation for people is getting to know other lifestyles”. This coincides with the interpretation of the tourists interviewed at the Santa Marta slum, which reinforces the information. On the other hand, the tourists tend to interpret that slum tourism results in social and economic benefits, at the same time that they accept the fact that the travel agencies profit from misery. Although these opinions may appear inconsistent, the fact is that the tourist may effectively be considering that other forms of tourism might benefit the slums.

After asking the tourist about his or her perceptions about the activity of tourism, at a certain point, the tourist was asked straight out if he would effectively be interested in visiting a slum community. Most answered affirmatively, provided that this percentile was somewhat higher among Brazilian tourists (58.2%) than among foreign tourists. The difference between the two groups (6.9 percent) was not big, but it is inconsistent with the reality, considering the nearly absolute predominance of foreign tourists in this mode of tourism. However, this finding may be a relevant indication of a repressed demand among Brazilian tourists, which could be better explored by the field workers.

OPPORTUNITIES

Some of the tourists who visited the slum also criticized the tour, especially in terms of the infrastructure. The tourist attractions, for instance, were poorly evaluated, receiving a score of only 6.5 and, moreover, items related to consumption, such as bars and sales of local products, received scores under 5.

The good news is that, despite these structural deficiencies and the considerable underuse of the site’s economic potential, which can be remedied with the proper planning and incentives, the tourists leave the location very satisfied with the experience. For 79.1% of them, the visit met their expectations to a certain level, which is reinforced by the fact that more than 80% stated that they would recommend the attraction to other people, which preserves the benefit of the mouth-to-mouth promotion cycle that partly sustains this type of activity. From the results, we can infer that there is also space for the slum lodging market, to the extent that approximately 30% of the tourists said that they considered that a viable option.

Generally, the surveys performed with tourists who effectively went on the slum tour show that the cognitive and sensorial impact of the visit cannot be treated superficially. After the experience, the slum is recognized in a more positive manner. Poverty remains the most perceived aspect, but the number of references to it drops considerably. The same happens with the perceptions of disorganization, despair and violence. These categories lose power, in favor of other more positive aspects, such as solidarity, joy, freedom, tranquility and development.

This process of reinterpretation is even referenced by other residents of slums, especially Rocinha, as one of the relevant aspects of this tourism, which might serve to prevent the unequivocal association between the slum and the violence advertised by the media (Freire-Medeiros, 2009).

Finally, we determined that the city is perceived as safe, especially among foreign tourists. The tourist’s perception, whether Brazilian or foreign, in terms of the city’s safety, influences, albeit at different levels, the interest in visiting slums: the greater the sense of safety, the greater the interest in this type of tour.

The city of Rio de Janeiro, which is a tourist destination by nature, can no longer ignore the existence of this branch of tourism, which effectively sparks the interest of its visitors. With the arrival of the UPPs, the slums became even

114 more integrated with the city’s daily routine and its alleys are now easily accessible by the public. It is important that the city invest in the wellbeing of tourists and residents, both in the slums and in the rest of the city, thus allowing the integration of the spaces that were once segregated. This form of tourism can bring good opportunities for everyone as long as the activity’s social and environmental aspects are respected.

The study lists options of activities that can be combined with slum tourism, potentializing the generation of jobs, leveraging income and social inclusion. These options are not based on mere welfarism, but on the entrepreneurial, creative capacity that the communities residing in the slums possess and should develop, such as the production of arts and crafts and lodging.

The integration between slums and the remainder of the city is consistent with the sustainability proposals derived from the Earth Summit of 1992 and restated by the city’s Master Plan, which then determined that the slums would not be removed. Since then, the city has sought ways to deal with the territories segregated by violence and by drug trafficking. The public security policy based on pacifying initiatives adopted in the past four years has been crucial to enable this approach, enabling the free circulation of the citizens. Slum tourism emerges as a sustainable, viable means to integrate these territories and affords an opportunity to generate business that contributes to the eradication of poverty and favors social inclusion.

CHART 1
REASON TO VISIT THE SLUM COMMUNITY, PER TYPE OF TOURIST (% YES)

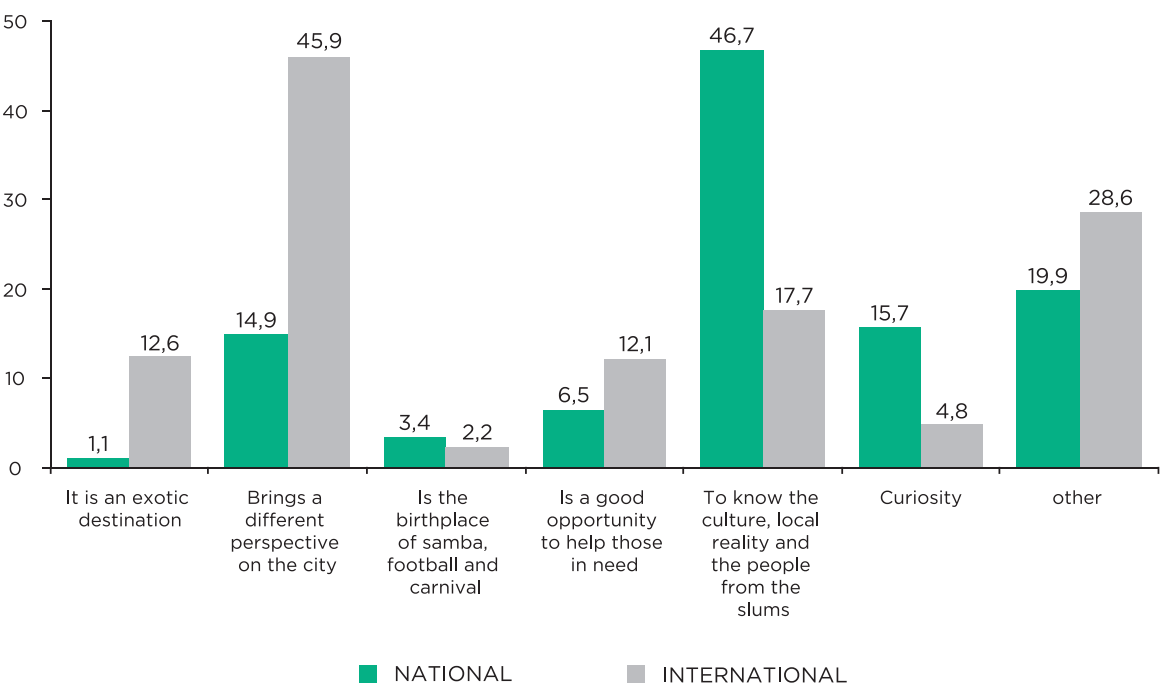
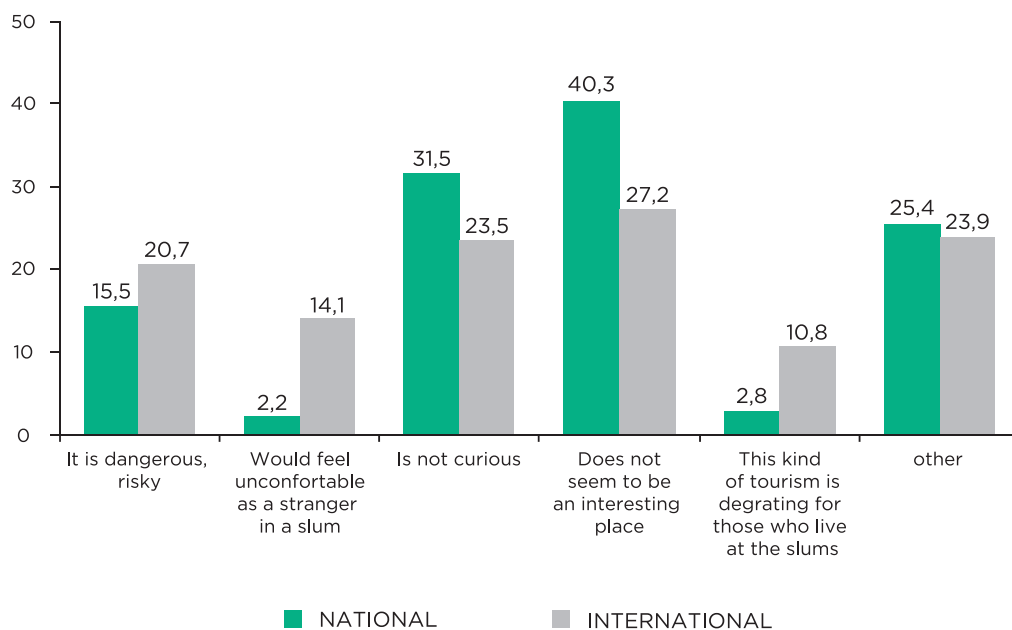


CHART 2

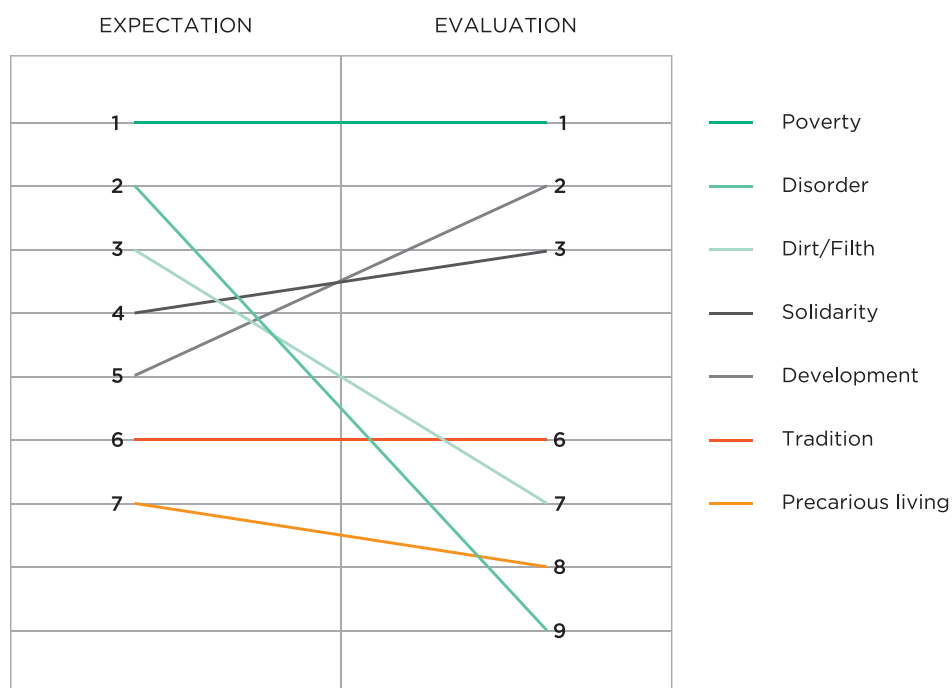
REASON FOR THE LACK OF INTEREST IN VISITING A SLUM COMMUNITY (% YES)



SOURCE: DRAFTING FGV PROJECTS

CHART 3

COMPARISON BETWEEN EXPECTATION AND SUBSEQUENT EVALUATION OF THE SLUM



SOURCE: DRAFTING FGV PROJECTS



article

ENVIRONMENTAL LICENSING: AN INSTRUMENT AT THE SERVICE OF SUSTAINABILITY

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ABSTRACT

Rio de Janeiro is going through an unique moment. Businessmen want to invest - in the period 2012-2014 - a record amount of R\$ 211.5 billion in the state, surpassing the targeted investments. This article intends to show, in this context, the importance of environmental licensing for the sustainable development of the state, the evolution of its regulation, as well as the challenges that must be overcome in order to make it even more efficient.

Rio de Janeiro is experiencing a unique moment. The people of this city, always very patriotic when asked about the geography and lifestyle of their marvelous city, on the other hand, suffered through decades of dissatisfaction with the lack of security and opportunity in the metropolis, which constantly registered a growth rate below the country's average. Fortunately, the reality has now changed. The population has not only regained its belief in the state, but is now going through a moment of euphoria, in which everyone wants to participate and take advantage of the good economic phase.

Rio de Janeiro, more than any other Brazilian state, reflects the country's excellent moment. The numbers are impressive. As shown by the appraisal produced by the Federation of the Industries of the State of Rio de Janeiro (Firjan), during the period between 2012-2014, the business community plans to invest the – record – amount of R\$ 211.5 billion in the state, exceeding the investments directed to the states of Minas Gerais and São Paulo. And it was not by chance that this state reached Standard and Poor's investment grade, or that its capital was included in the list of the Top 5 Latin-American cities in terms of investments received.

However, without the license from the environmental bodies, the enterprises that impact the environment cannot start up their activities. And, precisely for this reason, the Environmental Licensing System is one of the key elements of development, which is why it must operate efficiently and expeditiously, protecting the environmental resources and controlling the social impacts, while at the same time meeting the demands for growth and development.

This article proposes to show, in brief, the importance of said instrument for the sustainable

development of Rio de Janeiro, the advancement of its regulation, as well as the challenges that must be overcome in order to make it even more efficient.

THE IMPORTANCE OF ENVIRONMENTAL LICENSING AS A NECESSARY INSTRUMENT FOR THE SUSTAINABLE ECONOMIC DEVELOPMENT OF RIO DE JANEIRO

CONAMA Resolution 237/97 defines environmental licensing as an “administrative process by which the competent body licenses (investigates the environmental viability of and authorizes) the physical setting, installation, expansion and operation of enterprises and activities that are aggressive to any environmental resources, deemed effectively or potentially pollutant, or any activities that, in any way, are capable of causing environmental degradation”. And even more than that, to license an activity means to attest that it will reconcile its economic development with the preservation of the environmental resources, so that the next generations are not prevented from enjoying their benefits.

So, environmental licensing has a mixed economic-environmental nature, making the development of the national economy compatible with the preservation of an asset that is essential to human life – the environment.

As its legal definition suggests, practically all new enterprises planned for Rio are, in principle, subject to this approval procedure, since the activities that are not environmentally impacting and/or pollutant are rare exceptions. This is precisely why the state's capacity to absorb the sizeable investments is directly tied to the reasonableness, efficiency and, mainly, the expeditiousness of its environmental licensing processes.

The neighbor's grass is no longer greener. Today, Rio de Janeiro receives more investments than Minas Gerais and São Paulo. Over 230 new enterprises will be established, which will go beyond the oil fields and the major international events. Among the segments that will receive the most investments are the infrastructure segment, which will receive R\$ 51 billion (24.1%); the ship construction industry, with investments of R\$ 15.4 billion (38%); followed by the metalworking industry, which will receive R\$ 10.1 billion; and the petrochemical industry, with investments of R\$ 6.1 billion (15.1%).

All these segments are highly dependent on the procurement of environmental licensing in order to transform their projects into reality. This level of state control over private enterprises is justified by the social-environmental benefits afforded by the System.

The environmental licensing process does not consist of a single act, but, rather, it is an ongoing process comprising, as a rule, 3 stages – the Preliminary License (Licença Prévia, LP), the Installation License (Licença de Instalação, LI), and the Operating License (Licença Operação, LO). The latter must be perpetually renewed, so as to ensure that, for the duration of the enterprise, the same is compliant with the environmental laws.

One of the main stages is the production of the Environmental Impact Studies (Estudos de Impacto Ambiental, EIA) and the respective Environmental Impact Report (Relatório de Impacto do Meio Ambiente, RIMA). The nature of these studies is essentially preventive. They are used to identify not only environmental impacts, but also any social impacts, or impacts to the cultural heritage, which must be mitigated and/or compensated by the entrepreneur. To illustrate the extent of the control of such impacts, Companhia Siderúrgica

Nacional (CSN) signed a Term of Adjustment of Conduct (Termo de Ajustamento de Conduta, TAC) involving no less than 250 million Reais, in view of the implementation of environmental improvements in its industrial compound, with special notice to the construction of a sewage treatment plant in Volta Redonda, in the State of Rio de Janeiro. Petrobrás, in turn, upon the renewal of the operating license of the Duque de Caxias Refinery (Reduc), assumed, under the same instrument, the commitment to invest R\$ 1.1 billion in environmental recovery initiatives.

Another important stage in the licensing process is the holding of Public Hearings, with the purpose of informing the communities impacted by the enterprise of the characteristics of the projects and the results of the impact studies. It is also the primary channel to allow social participation, since, during the course of the hearing, the public is allowed to formulate questions, which, upon their filing, become an integral part of the administrative process, and must be addressed by the entrepreneur.

In light of the characteristics of the Environmental Licensing System, it becomes clear that, when conducted efficiently, reasonably and, especially, expeditiously, it becomes an effective, crucial instrument to ensure a city's sustainable development.

RIO DE JANEIRO AT THE FOREFRONT OF ENVIRONMENTAL LICENSING

Environmental licensing was first addressed under Brazilian law by the legislation of the State of Rio de Janeiro, under Decree-Law 134/75, which established the preliminary “authorization”, issued to individuals or legal entities, for the operation or functionality of their facilities or

activities that might, effectively or potentially, cause environmental pollution. And Rio took another step toward the future with the appropriate initiative of combining all its environmental bodies (FEEMA, IEF and SERLA) into a single instrumentality, named the State Institute of the Environment (Instituto Estadual do Ambiente – INEA). This avoided the countless conflicts of jurisdiction and overlapping understandings that often occurred among the three entities. As a result, today there is less legal insecurity and greater efficiency in the control of environmental impacts. The success of this new model was so great that it was copied and replicated in several Brazilian states.

But the groundbreaking initiatives do not stop there. The state of Rio de Janeiro has one of the most advanced legislations in Brazil in terms of environmental licensing. The new system – SLAM, introduced by Decree 42159/09, breaks with the traditional licensing process, which consisted, basically, of the LI, LO and LP. One of the important innovations was the institution of six new types or kinds of specific licenses (the LAS, LPI, LIO, LAR and LOR), many of which did not exist before, as well as the creation of new instruments, more

appropriate to the control of pollution, such as the environmental authorizations and environmental certificates. The new licenses are simpler, and their different licensing processes more sensitive to the peculiarities of each concrete case. An example of this is the Simplified Environmental License (Licença Ambiental Simplificada, LAS), which, as its name suggests, is much simpler than the traditional process. With it, the environmental body can attest, with a single act, the environmental viability, physical setting and authorization of the implementation and/or operation of enterprises or activities. This way, the three stages of the process were combined into one, thus expediting it.

Another innovation introduced by the decree was the creation of a system that allows the classification of the activity under different licensing systems, according to the level of environmental impact and the reach and polluting potential of the activities. In certain cases, when the environmental impact is negligible or minimal, the licensing may even be waived (Class 1). Such enterprises will then only be subject to the authorization – an infinitely simpler and faster procedure, which nonetheless adheres to the rules governing sustainability.



In light of this ongoing process of modernization, enhancement of the existing instruments and good management practices, the state of Rio de Janeiro has become a benchmark, possessing one of the most advanced environmental control systems in Brazil, which directly benefits the city.

THE ENVIRONMENTAL LICENSING SYSTEM – SLAM

Despite the advancements in terms of environmental laws, there are still certain setbacks in the processes, which are liable to improvement. However, the lack of celerity is not explained exclusively by environmental protection. The reasons for the delays are many, with special notice to the conflicts of jurisdiction, which are not rare, and still exist even after the enactment of Supplementary Law 140/2011; in addition to the environmental body's broad discretionary power in deciding whether or not to grant the licenses, and to impose requirements not anticipated under the law. Lastly, the lack of communication, consistency of ideas and coordination among the various competent agents appears as the main element capable of generating a crisis in the Licensing System.

The environmental licensing process in Rio de Janeiro is a complex one, in which, in addition to INEA, other institutions also act, such as INEPAC and DRM, at the state level, and Instituto Chico Mendes and IBAMA, at the federal level, without prejudice to the participation and control of other legitimate players, such as the Public Attorney's Office (Ministério Público, MP) and society. If, on the one hand, the large number of bodies involved ensures the intense scrutiny of the process, rendering it more legitimate, on the other hand, this has caused detrimental delays to the state's development.

To date, there are no rules that clearly set limits to the intervention of each stakeholder. And this is precisely why many processes are taken to the Judiciary, which, when called upon to settle the disputes, often assumes the role of the licensing body. This situation is prejudicial to all the parties involved, in that it affects the efficiency and quality of the process, which should be decided by those having more technical knowledge to deliberate on the matter.

The appeal to the Judiciary should be used as a last resort, when it proves impossible to



conciliate the interests of all the parties involved. The lack of compatibility, of interests, policies or methodologies among the agents has turned the system into a veritable Babel Tower, which, therefore, favors the lack of consensus. The larger the enterprise, the greater the number will be of agents involved, which has turned the process of environmental licensing of major enterprises into a Herculean task, even for the most experienced and knowledgeable entrepreneurs.

Nonetheless, the state Government estimates that approximately 1.9 trillion will be invested in Rio, which makes the state the main destination of the megaprojects planned in Brazil. The Pre-Salt Layer, the Açú Port and Steel Mill Complex, the “Porto Maravilha” (Wonderful Port) project, the ThyssenKrupp CSA steel mill (TKCSA), the Brazilian Marine nuclear submarine construction yard, the COMPERJ project of Petrobrás, as well as the infrastructure work in preparation for the World Cup of Soccer and the Olympics are just some of the many examples that we could mention. So, the need for the ongoing improvement of the existing Licensing System remains clear, so as to ensure that it is always expeditious, without, however, compromising its sustainable essence.

CHALLENGES:

In light of the high complexity of the current stage of the Licensing System of the State of Rio de Janeiro, no definitive solutions can be proposed. However, certain actions may contribute to the management of the risks involved in this process, so as to mitigate the setbacks that hamper the process.

In brief, the proposal is to use the appropriate tools to mitigate the questions raised by each stakeholder. In terms of the environmental body, a new instrument that might be quite effective in reducing unexpected demands and increasing the legal security of the process is the Environmental Certificate. The environmental certificate (CA) instrumentalizes the entrepreneur’s right to “certify any environmental information, provided the body possesses the information and the information is connected with its institutional purposes”.

In terms of the possible uses of the Environmental Certificate, State Attorney Rafael Daudt D’ Oliveira, in his article titled “The New Environmental Licensing System – SLAM – of the State of Rio de Janeiro” offers the following examples:

“There is nothing to prevent, for instance, a company that is duly licensed from requesting the issuance of a certificate to attest that, within the area in which its enterprise is installed, (i) there are no permanent preservation areas, (ii) there are no plant and animal species qualified as rare, endemic or threatened of extinction, (iii) there is no permanent vegetation typical of the Atlantic Forest biome, or, (iv) that it executes a voluntary plan in view of environmental conservation and recovery, in or out of the area of its enterprise, or yet, (v) that it develops environmental education programs in partnership with the environmental bodies.

These are just some examples of the information that could be certified in the environmental certificate, which do not exclude any number of other possibilities within the wide range of

environmental information that might be certified.” So, we find that the Environmental Certificates are now the most important instrument in the management of the risks inherent to the licensing process. In fact, if the entrepreneur has any doubt as to the legal classification of its enterprise, it can appeal to the environmental body, which, in turn, will be bound to respond. This way, any doubts concerning the process are elucidated, thus avoiding inconsistencies that might entail the submittal of questions to the body and, as a result, delays in the licensing process.

Another relevant aspect refers to the possibility of lessening the reasons that might entail questions by the MP. How can this be done? The premise is that the Public Attorney’s Office is responsible for safeguarding the social and individual interests that happen to be inaccessible. So, as a rule, it does not act at its own initiative, but only when called to do so by society.

So, it is crucial to maintain an open dialog with the communities residing near the enterprise. In other words, social dialog should be used as a means to procure a “social license”.

To this end, the entrepreneur must bear in mind that the Public Hearing is an effective instrument to enable debates with the community. The execution of preliminary work with the people directly involved and affected, mapping the most recurring demands and dialoguing with the main community leaders is extremely important. The needs, negative impacts, requirements, and any complaints by the population should be identified and resolved

by the entrepreneur as soon as possible. By doing so, the likelihood of future questioning by non-government organizations (NGOs) and associations of the representatives of groups affected by the enterprise is minimized as well.

Moreover, since the environmental inspection work by the Public Attorney’s Office focuses on the examination of the EIA/RIMA, the entrepreneur should measure no financial resource in the selection of the multidisciplinary team that will execute the studies, and in the hiring of a specialized legal advisory, qualified to assess the proper compliance with the study’s legal requirements. Whenever possible, the hiring of external auditors, to oversee and require from the companies the production of qualified environmental studies, is a welcome initiative.

And last, but not least, it is most recommended that the entrepreneur try to align the methodology employed in the Environmental Impact Studies with the methodology used by the technical teams of the environmental body and the Public Attorney’s Office.

However, no matter how efficient the instruments produced are, they do not entirely eliminate the risk of judicial conflicts in any given licensing process. The ideal situation would be if the environmental laws advanced in the sense of establishing a mediating body to act in the settlement of conflicts, assisting in the creation of consensus and determining a single direction for the licensing process, thus making the lives of everyone easier and contributing to a more sustainable Rio de Janeiro.

