

Large-Scale Projects Shaping Urban Futures.

A Preliminary Report on Strategies, Governance and Outcomes Based on Eight Case Studies in Four Countries.

Coordinator Loraine Kennedy





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1 Introduction¹

Economic development strategies rely increasingly on large-scale economic and infrastructure projects or megaprojects. This reflects the changing role of infrastructure “from being a simple precondition for production and consumption to being at the very core of these activities”.² This is the starting point for the research conducted in workpackage 2 (WP2). Its objective is to contribute to our understanding of how economic development strategies, expressed through megaprojects, articulate with other types of urban policies to shape urban futures. It aims to evaluate the relative importance of large-scale projects compared to other strategies in urban development politics. We can recall that the main assumption of the overall Chance2sustain (C2S) project is that in order to promote more resilient patterns of urban development, cities need to incorporate different types of knowledge into their strategic planning activities with the active participation of

various types of actors. This means for instance that economic growth strategies would need to integrate environmental and social dimensions and that local governance would need to involve a wide range of social actors including socially marginalized groups in order to produce more deliberative and democratic decision-making. It is also assumed that participatory spatialised knowledge contributes to a better understanding of urban development processes, including the social, spatial and environmental impacts on the urban local economy of particular economic development strategies, including in this case the promotion of large-scale economic and infrastructure projects.

By choosing to focus on large-scale projects, we recognize that these are not ‘new’ in the study of urban development. Indeed, they have been deployed for decades in the countries we are studying, in both urban and rural areas, as a tool for achieving economic modernisation, and in some cases of nation-building e.g., in post-colonial India. One issue we examine is whether the ‘new’ forms of megaprojects, as defined in the academic literature, have started to replace the older forms in the cities we are studying. The literature on the United States, for example, documents the decline of megaprojects in the 1970s as a result of a backlash from the social groups most negatively affected by urban redevelopment projects during the 1950s and 1960s, including low-income and minority residents of older neighbourhoods.³ ‘New’ types

1 This report is a preliminary analysis based on inputs from several research teams. In Brazil: CEBRAP, Sao Paulo, Julia Andrade, Joao Carlos Monteiro, Eduardo Sombini (coor. Adrian Lavalle Gurza); in Peru: FORO Lima, Guillermo Takano (coor. Liliana Miranda); in South Africa: University KwaZulu-Natal, Durban, Glen Robbins, Cathy Sutherland, Dianne Scott; in The Netherlands: University of Amsterdam, Neeraj Mishra and in France: CEIAS (EHESS-CNRS), Paris, Bérénice Bon, Aurélie Varrel, Loraine Kennedy (workpackage coordinator). Summaries of the fieldwork reports of each case study are attached in the appendices.

2 Flyvbjerg, Bent, Nils Bruzelius and Werner Rothengatter. *Megaprojects and risk : an anatomy of ambition*. United Kingdom ; New York: Cambridge University Press, 2003: 2.

3 Altshuler, Alan A. and David Luberoff. *Mega-projects: the changing politics of urban public investment*. Washington, D.C. and Cambridge, Mass.: Brookings Institution Press;

1 Introduction

of megaprojects emerged in the late 1980s and 1990s, and have generated renewed interest.

One of our assumptions going into the project was that mega-projects are concrete manifestations of a strategy of international competition among large cities to attract investments. As underscored in the WP2 literature review, much of the critical literature views global capitalist restructuring as the primary driving force of this particular type of urban development model, captured in the expression 'urban entrepreneurialism'⁴. In that theoretical perspective, the megaproject is an emblematic form of urban restructuring that is directly linked to the evolution of global capitalism and the spread of neoliberal ideology⁵. Our research suggests that this assumption needs to be qualified on a case-by-case basis, as our study cities illustrate quite diverse patterns with regard to strategic planning and to the importance of positioning themselves at the global scale.

Regardless of the motivation driving their development, it has been assumed that megaprojects play an important role in shaping the future of large cities, at all scales, through various means: changes in land use, dislocation of people, changes in employment and local economies, distribution of environmental costs, to name a few. As such, it can be assumed that they are influencing the resilience of cities, their future capacity to resist or recover from exogenous shocks.

Megaprojects, often designed by prominent architects and planners operating transnationally, foster the dissemination of new urban forms and spatial patterns, often without much local awareness about these imports. In that sense they cause displacements, both creative and destructive.⁶ Because of the manner in which megaprojects are conceived and implemented, they retrace in profound ways the boundaries between private and public space, and redefine access to public goods and to mobility. As such, megaprojects can be highly influential in reshaping the daily functioning of the city at the local level for the entire

urban population; they can shape the future of city landscapes and what "city" means in a given context.

WP2 as a thematic area within the C2S project has evolved considerably over the course of this first period, and the conceptualisations related to its key object (large-scale projects) have become more precise as a result of critical inputs from participants from all countries, and especially through efforts to inter-link workpackages. Consequently, the main research questions in WP2 have become more focused and can be summarised as follows:

1. How much importance is given to large-scale economic and infrastructure projects in different types of cities, in relation to alternative strategies for economic development?
2. How do we characterise the politics of these projects with relation to governance patterns and in terms of actors and institutions?
3. How are megaprojects contributing to the spatial dynamics observed in the city, shaping its present and its future, with regard to urban landscapes (production of space, social segregation) and the urban economy (employment, income)?
4. How is the question of land for urban megaprojects managed?
5. To what extent are social and environment impacts of mega-projects taken into account by policy-makers and project promoters?
6. How can we characterize qualitatively the major social, spatial and environmental impacts of mega-projects in our case studies (in collaboration with other WPs)?

These research questions require a multi-scalar approach as well as a toolkit of mixed methodologies for apprehending the various dimensions of megaproject development. Briefly Stated, these include:

- Constructing narratives (city profiles and case study level) and mapping;
- Actor centred analysis: identifying major actors and assessing their respective roles and interactions in megaproject choice and implementation;
- Analysis of documents (policy documents; project-related documents; critical studies by NGOs, etc.);
- Interviews with key stakeholders (policy-makers; parastatal agencies; management agencies; contracting firms; opposition leaders).
- In-depth qualitative fieldwork, and quantitative surveys where needed.

Lincoln Institute of Land Policy, 2003.

- 4 Harvey, David. „From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism. *Geografiska Annaler*. Series B 71(1) 1989: 3-17.
- 5 See for instance Eric Swyngedouw, Frank Moulaert and Arantxa Rodriguez, Neoliberal Urbanization in Europe: Large-Scale Urban Development Projects and the New Urban Policy. In *Spaces of neoliberalism: urban restructuring in North America and Western Europe*, eds. Neil Brenner and Nik Theodore. Malden, Mass., Oxford: Blackwell, 2002.
- 6 Gellert, Paul K. and Barbara D. Lynch. Mega-projects as displacements. *International Social Science Journal* No. 175 (March 2003):15-25.

2

Defining Megaprojects and Selecting Case Studies

We have adopted a loose definition for megaprojects, which corresponds *grosso modo* to the one used by Susan Fainstein: “Essentially it involves a costly scheme for development of a contiguous area, requiring new construction and/or substantial rehabilitation. Implementation may take a number of years and may be the responsibility of a single or multiple developers. Megaprojects always include a transformation of land uses”.⁷

Among the criteria used in making our choices, a key consideration was the capacity of the project to shape future development in the metropolitan area. This resonates with the broad definition offered by Gellert and Lynch: “projects which transform landscapes rapidly, intentionally, and profoundly in very visible ways, and require coordinated applications of capital and State power”.⁸ The coordination between public and private actors or between different types of State actors, is one of our justifications for studying megaprojects, i.e., they are a prism through which urban governance can be apprehended. This position was expressed by Alan Altshuler and David Luberoff, who studied megaprojects in the United States: “efforts to realize large-scale investment projects often provide an unusually revealing window on patterns of influence in urban development politics. Such projects involve huge commitments of public resources and often entail significant threats to some interests and values even as they promise great benefits to others”.⁹

Selection of WP2 case studies

The choice of case studies was based on multiple criteria, not all of which had a direct bearing on the WP2 problematique outlined above. In particular, an effort was

made to coordinate choices so that several WP teams could work on the same case, thereby developing linkages between thematic areas and generating more in-depth knowledge of urban development politics. For instance, in Delhi, the WP2 case study ‘Shastri Park’ is equally relevant for WP4 issues, since it is located right on the riverbanks of the Yamuna River, and WP3 issues, since this State-led project, like others in the area, has involved large-scale displacement of illegal settlements located in or near the riverbed. In this sense, it is emblematic of the role of megaprojects in urban development in the Indian capital.

Table 1 below classifies the WP2 case studies according to the primary purpose they are intended to serve (indicated with an “X”). The main categories are (i) infrastructure for basic services (water management & housing), (ii) economic development (iii) transport, and (iv) urban redevelopment.¹⁰ Since most projects are in fact multi-purpose, the secondary purpose is also indicated (“x”).

In several cases it was not easy to identify ‘primary’ and ‘secondary’ purposes, and the issue remains open to discussion. For instance, the megaproject studied in Durban, the King Shaka International Airport/Dube TradePort, is an international airport project conceived as an integral part of a multi-modal logistics platform, the plans for which include “high value manufacturing, agro-industry and technology-enabled B2B commerce” (Dube TradePort Company, undated: 8). Considering such a case primarily as a transport project would neglect key aspects of the aerotropolis concept, which gives the project its broad scope. That project, along with the Porto Maravilha Project in Rio, are the megaprojects in our study that most closely resemble the ‘new’ generation of megaprojects discussed in the literature, on the basis of European and American examples primarily. To recall its characteristics: the focus is flexible and diverse rather than singular and monolithic and involves the creation of mixed-use spaces; there is a shift from collective benefits to a more individualized form of public benefit; such projects

7 Fainstein, Susan S. Mega-projects in New York, London and Amsterdam. *International Journal of Urban and Regional Research* 32(4) 2009:768.

8 Gellert and Lynch, op cit., pp. 15-16. However, their more detailed definition, which underscores important potential features, appears too restrictive: “[Megaprojects] use heavy equipment and sophisticated technologies, usually imported from the global North and require coordinated flows of international finance capital ...” op cit, p. 16). These characteristics must be established on a case-by-case basis.

9 Altshuler and Luberoff, op cit, p. 4.

10 Other types of classification are also in use. Gellert and Lynch, for instance, divide mega-projects into four types: (i) infrastructure (e.g., ports, railroads, urban water and sewer systems); (ii) extraction (e.g. minerals, oil, and gas); (iii) production (e.g. industrial tree plantations, export processing zones, and manufacturing parks); and (iv) consumption (e.g. massive tourist installations, malls, theme parks, and real eState developments).” Op. cit. p. 16.

2 Defining Megaprojects and Selecting Case Studies

Table 1: Types of megaprojects (X = dominant purpose; x = secondary purpose)

Location and name of project	Infrastructure for basic services (water, housing)	Economic development	Transport (road, metro, airport, seaport)	Urban redevelopment
PERU				
Arequipa Water and Sanitation System	X			
Lima Linea Amarilla – Via Parque Rimac			X	x
INDIA				
Chennai Expressway & IT Corridor		X	x	
Delhi Shastri Park Metro Station & Depot		x	X	
Kalyan Water Supply and Treatment	X			
SOUTH AFRICA				
Durban King Shaka International Airport and the Dube TradePort		X	x	
Cape Town N2 Gateway & housing project	X		x	
BRAZIL				
Rio Porto Maravilha		x		X
Salvador Historic Centre				X
Guarulhos Tiête Park	X		x	

simultaneously re-inscribe and reinforce socioeconomic divisions; the diversity of forms and uses employed inhibits the growth of contestational practices.¹¹ We are engaging critically with this literature to determine to what extent our projects conform or diverge with this ideal-type, on the basis of our empirical research.

Conversely, some of our other case studies resemble ‘old’ megaprojects i.e., State-initiated, State-financed projects aimed at the creation of public goods, whose physical appearance corresponds to “monolithic singular

structures extended via networks”. This is the case of the large-scale water supply scheme in Kalyan, a satellite city of Mumbai as well as the water treatment project in Arequipa, Peru’s second city.

A more ambiguous example would be the “IT Corridor project” in Chennai, India, centred on the construction of a 18 kilometre 6-lane expressway, and conceived as a means to promote the development of the IT industry in this part of the city, by strengthening agglomeration economies. The toll-expressway was built to inter-link three large IT parks, built by State (provincial) government agencies, as well as several private IT campuses located at different points along the road. Hence the basic road infrastructure is only one component of an ambitious ‘vision’ of urban development driven by IT activities, which

11 Lehrer, Ute and Jennefer Laidley. Old Mega-Projects Newly Packaged? Waterfront Redevelopment in Toronto. *International Journal of Urban and Regional Research* 32(4), 2009. Susain Fainstein, op cit.

range from high value-added software engineering to lower value BPO services. To achieve its broader goals, this model relies on private investments to develop property (office buildings, housing, commercial) and to set up economic activities. Like the Brazilian and South African projects mentioned above, it is a large-scale mixed-use project that combines housing, economic activities and transport networks. Whereas Chennai's IT Corridor and Durban's aerotropolis are basically greenfield developments, Porto Maravilha Project in Rio involves urban redevelopment, transforming disaffected or reconverted industrial spaces and substandard settlements into more valuable property.

This diversity of cases allows us to explore various aspects of urban development processes in our study cities and to question whether the type and purpose of the megaproject have an influence on the decision-making processes and the actors involved. Equally important, this diverse array of cases has allowed us to reflect on what types of megaprojects are being developed in which types of cities, depending on their economic bases and their situation within the urban hierarchy of their country and on a global scale. This is a key research question and one that will be further developed as the project moves forward. Table 2 below briefly presents some basic data about the cities covered in the C2S project.

Table 2: Economic, demographic and political profile of C2S study cities

Cities and economic profile	Pop. 2007	Growth rate 2000-2005	National Or provincial capital
Delhi, India (administrative, mixed)	15.0	2.7	Yes (n)
Chennai, India (service-based)	6.9	1.7	Yes (p)
Kalyan, India (industry), within Mumbai metropolitan region	1.2	n.a.	No
Durban, South Africa (industry)	3.0	2.1	No
Cape Town, South Africa (services)	3.0	2.6	Yes (p)
Lima Metropolitana, Peru (administrative, mixed)	8.0	2.1	Yes (n)
Arequipa, Peru (service-based)	0.8	2.1	No
Rio de Janeiro, Brazil (service based administrative)	11.7	1.2	Yes (p)
Salvador, Brazil (mixed industry and services)	3.5	2.3	Yes (p)
Guarulhos, Brazil (mixed industry and services) within Sao Paulo metropolitan region	1.2	2.9	No

Source: World Urbanization Prospects database 2007, adapted from DoW.

Although megaprojects are an analytical entry point for studying urban governance and urban transformations, as opposed to a research object *per se*, we are engaging critically with this category, which has attracted renewed attention in recent years from academicians and policy-makers. One of the objectives of this research is to understand to what extent the theoretical constructions put forth in the academic literature, based for the most part on examples from Europe and America, are relevant for the cities we are studying. In other words, do our case studies corroborate the theoretical propositions put forth, or challenge them? How can our studies contribute to the knowledge about megaprojects in fast-growing cities in developing economies?

To test theoretical propositions across our different case studies, three entry points have been selected and are discussed below using examples. These entry points correspond to WP2's key research questions (cf. Matrix).

(1) The importance given to large-scale economic and infrastructure projects in different types of cities, in relation to alternative strategies for economic development

This question involves understanding the relative importance of megaprojects in city development plans and policies. Do they figure prominently in planning documents or 'vision Statements'? If they do indeed figure, to what extent do they conciliate economic and social goals? As has been noted with regard to European and American cities, although megaprojects are physically similar, they differ with regard to the attention given to spreading the benefits across social groups and to ensuring accessibility to new infrastructure facilities and public spaces.¹²

On the basis of our respective fieldwork and our first attempts at comparing and contrasting our cases, we have highlighted two important aspects for answering this set of questions: the role of travelling concepts and the link between megaprojects and mega-events.

Our case studies underscored the importance of transnational 'models', circulated through transnational

knowledge flows, which embody particular ideologies about urban development and economic growth. These ideas, or 'travelling concepts', contribute to promoting norms about 'global cities' or 'world class cities'. Such concepts circulate through 'transfer agents'¹³ such as international development organisations, private consulting companies and global policy networks, e.g., World Bank, McKinsey Global Institute. Policy transfer has been defined as a process by which *knowledge* about policies and administrative arrangements in one setting is used in developing policies and arrangements in another political setting.¹⁴

Evidence that travelling concepts have influenced urban planning and practices was found in a number of our study cities. It is important to point out that there is not a single source of inspiration, e.g., from the 'Global North', and many urban models are circulating simultaneously. For instance, Delhi's metro project explicitly borrows its financial model from Hong Kong (financing the metro through property development), Chennai's IT corridor was most directly inspired by another Indian city, Bangalore, and Dubai was one of the models informing Durban's aerotropolis project. It seems that in these cases, the concepts were mobilised strategically by various local and regional actors to promote certain large-scale projects, and were not promoted *per se* by exogenous actors. It is not clear however to what extent these imported models were deliberated in the local setting and to what extent they underwent adaptation to local conditions.

In both the Durban and Rio cases, some version of the current projects was in the plans for years but could not garner sufficient support until a mega-event gave them a boost. This brings us to a second observation.

Mega-events such as the Olympics or other international sporting competitions act as a powerful catalyst for undertaking large-scale urban projects, a fact that is illustrated well through project timelines. A project that has existed for decades on paper can suddenly be dusted off and put under construction once a mega-event is announced. Because of the high visibility of such events,

13 Diane Stone. Transfer agents and global networks in the 'transnationalization' of policy. *Journal of European Public Policy* 11(3), 2004:545-566.

14 Stone, op. cit. p. 545.

12 Fainstein op. cit., Lehrer, Laidley, op. cit.



and their symbolic importance in terms of national prestige, countries are willing to make exceptional investments to ensure their success. Indeed mega-events offer a unique opportunity to 'market' the city and the country at a global scale, and it is commonly assumed that hosting such events attracts new sources of funding.¹⁵ Barcelona is considered a compelling example of how to successfully combine a mega-event with urban megaprojects. In preparation for the 1992 Olympics, the port and seafront were completely redeveloped transforming large areas of the city and reshaping the urban economy by boosting the city's tourist and recreational capacity. It has been suggested that 'semi-peripheral' polities are increasingly inclined to bid for hosting major international sporting events "as a pivotal strategic response to the exigencies of globalization".¹⁶ Such events entail various costs and risks that might need to be evaluated critically in light of opportunity costs for infrastructure for basic needs.

In five cities in the Chance2Sustain project, located in three countries, mega sporting events have had or are currently having a direct influence on large-scale urban development projects. Delhi hosted the 2010 Commonwealth Games and in addition to the construction of specialised facilities required for the event (stadia, athletes' village, etc), an overall thrust was given to other large-scale projects such as riverfront redevelopment and the extension of the metro rail system, with several new lines opening in time for the Games.¹⁷ South Africa organised the Football World Cup, also in 2010, and this event had a decisive influence on the decision to build the new international airport in Durban. Major new commitments to urban megaprojects (stadia and transport infrastructure) were made, financed in large part through grants from the national government. Other South African cities witnessed similar investments. Brazil won the bid to organise the Olympic Games in Rio de Janeiro in 2016 and the Football World Cup in 2014, which will take place in cities across the country including Rio and Salvador. The way that these mega-events relate to megaprojects is analysed separately in each case, but some patterns are emerging especially with regard to urban governance.

15 See the C2S Policy Brief no. 3 on Mega-events and mega-projects: <http://www.chance2sustain.eu/30.0.html>

16 David R. Black and Janis Van Der Westhuizen. The Allure of Global Games for 'Semi-Peripheral' Polities and Spaces: A Research Agenda. *Third World Quarterly* 25(7), 2004: 1195-1214.

17 Veronique Dupont. The Dream of Delhi as a Global City. *International Journal of Urban and Regional Research*, 35(3), 2011: 533-554.

(2) The politics and governance of megaprojects (actors and institutions)

This entry point concerns the decision-making processes with regard to megaproject development in relation to 'ordinary' governance practices in the study cities. We are interested in the various types of actors involved, situated at various scales, and their respective influence over the process. We attempt to understand in each case the balance between the structural forces that bear upon cities and local political agency. We also seek to evaluate the degree of public consultation or democratic participation in megaproject conception and implementation, as well as organised forms of contestation.

It should be noted that in all of our cases, without exception, megaprojects are not primarily, or not at all, a city-level initiative. This is linked in part to institutional factors, the statutory sharing of powers and responsibilities between different levels of government, which varies widely from country to country. It is also linked to politics and the real world functioning of democracy and party systems in each context. Finally, by virtue of their size and their capacity to transform, megaprojects usually fall outside the realm of 'normal politics'. Their governance is often characterised in the literature as 'exceptional', and funds and implementation are entrusted to agencies "well insulated from normal politics".¹⁸

In India, where municipalities, including the country's largest metropolitan cities, have limited mandates and are weak financially, provincial governments generally provide the impetus for large-scale investments in urban infrastructure.¹⁹ This is the case for instance with the IT Corridor project in Chennai, discussed above, which is being built by a specialised road agency of the provincial government, the Tamil Nadu Road Development Corporation (TNRDC). This kind of semi-autonomous 'parastatal' agency,

18 Fainstein and Fainstein 1983: 248, cited by Altshuler and Luberoff, op. cit., p. 251. See also Stephen Graham, Constructing premium network spaces: reflections on infrastructure networks and contemporary urban development. *International Journal of Urban and Regional Research* 24(1), 2000:183-200.

19 There are variations within India because State governments are empowered by the Constitution to legislate on urban administration. In some cases like Hyderabad in the State of Andhra Pradesh, State government agencies are even in charge of basic service delivery systems (health, water/drainage). See Archana Ghosh et al., A comparative overview of urban governance in Delhi, Hyderabad, Kolkata and Mumbai, in J. Ruet and S. Tawa Lama-Rewal (eds) *Governing India's Metropolises*, New Delhi: Routledge, 2009, pp. 24-54.

3 Interpreting Preliminary Findings

which answers to the executive branch of the State government, has considerable flexibility in its functioning, in comparison to line departments, which function within the administrative hierarchy. Semi-autonomous agencies are allowed to generate profits, for instance. In the case of Shastri Park in Delhi, the decision-making body, the DMRC (Delhi Metro Rail Corporation), is a joint venture between the State Government of Delhi and the Government of India.²⁰ In this set-up, the central government Ministry of Urban Development is the ultimate authority for the Metro project and its property developments. The Municipality of Delhi, which comes into the picture through statutory clearances (building plans) or through legal channels in case of litigations (cf. Appendix 5), has the smallest portfolio. This situation has been reinforced by the recent division of the municipality into three civic bodies: East Delhi, North Delhi and South Delhi corporations.

India's institutional framework for local government marks a striking contrast with that of South Africa. The latter's post-apartheid Constitution (1996) gave metro cities a large degree of autonomy, exclusive executive and regulatory powers and a single city tax regime. In addition to their wide-ranging powers, democratically elected metro governments also have extensive social and economic mandates: to reduce poverty, provide housing and services, redress inequality and promote economic development.²¹ Given this situation, it is important to note that most megaprojects, or flagship projects as they are called, are not driven by the municipality, nor are they primarily funded by it. The King Shaka International Airport for instance was primarily funded by the by the Airports Company of South Africa (the terminal and runway) and the Provincial Government (the airfreight hub and related commercial property facilities).

In Brazil, despite a relatively high level of fiscal and administrative decentralization at the municipal level, there is centralization of decision-making powers at the federal level, in the executive branch.²² The basic explanation for this pattern is the conditional transfer of funds from the federal government, aimed at ensuring similar social policies and levels of spending across municipalities. In the

case of the Porto Maravilha Project, the municipality is a central actor in the various consortia in charge of implementing the project (AEIU, CDURP) but other levels of government are also collaborating closely. For instance, the auction of rights to exceed existing building norms in Rio de Janeiro via 'CEPACs', the revenue from which is reinvested in the project, was conducted by federal agencies. In 2009, the political alignment between the three government levels (city, State national) was a decisive factor that facilitated the design of the political and financial strategies needed to support the numerous urban investments under way in Rio, including the redevelopment of the port zone.

In Peru, municipalities lack resources for undertaking large-scale projects in part because of a very narrow tax base, and also because of limited transfers from the national government. In 2010, only 12% of the public budget country was allocated to local governments, compared to 25% and 72% to regional and national governments respectively. The large-scale water and sanitation project in Arequipa was built by a private mining company, which initially required mandatory participation from municipalities covered under the project.

Our research underscores the importance of non-local levels of government in decision-making processes and project funding. This is a reminder that city development is a strategic issue that surpasses the city. Although this is probably true everywhere in the world to some degree, it appears to be more prevalent in our cases than in the examples developed in the literature. This corroborates the findings of other studies that point out that city governments in developing countries usually have to contend with more centralised political institutions, and are more dependent on other levels of the political system than their counterparts in the Global North.²³

Notwithstanding, we have found that local political elites —often acting within growth coalitions — have usually given support for megaprojects, which they perceive as bringing benefits to their constituencies. This suggests that global capital may play a secondary role of global capital in driving and developing megaprojects. This observation allows us to qualify certain theoretical models, which tend to view megaprojects as being imposed by global capital. Our studies suggest a more indirect relationship: rather than focusing on capital flows, it may be more relevant to

20 The direct participation of the central government was notably required in order to contract a loan from a foreign financial organization, the Japan Bank for International Cooperation (JBIC), for the first phase of construction of the metro. Cf. case study in appendix 5.

21 South Africa Country Report, Chance2Sustain working document, 2010, p. 26.

22 Brazil Country Report, Chance2Sustain working document, 2010, p. 8.

23 Richard E. Stren, Local Governance and Social Diversity in the Developing World: New Challenges for Globalizing City-Regions. In Allen J. Scott (ed.) *Global city-regions : trends, theory, policy*, Oxford ; New York: Oxford University Press, 2001, pp. 193-213.

map how knowledge is translated into ideological projects, for instance via a discourse on 'globalisation'.

Regarding the governance aspects, some broad similarities have been observed across our four study countries: opaque decision-making processes (cf. Tiête Park, Sao Paulo; metro stations in Delhi); 'sidelined' planning agencies (cf. Chennai); dominance of central/provincial governments vis-à-vis municipalities (with inter-city variations within a given country).

(3) Examining outcomes of megaprojects in terms of impacts and risks

Research is in progress on the social and spatial impacts as well as the risks of megaprojects in collaboration with the other workpackages. The aim is to evaluate impacts and risks using qualitative and quantitative investigation tools keeping in mind the broader goals of the C2S project. For instance, we consider the role of megaprojects in urban development, linked to agglomeration economies and city capabilities to move towards resilient strategies and outcomes. Some preliminary findings are discussed below.

Research in Chennai shows a stark contradiction between the provincial government's aim of pursuing agglomeration economies by developing an "IT Corridor", as part of a larger 'vision' involving the construction of several specialised IT parks over the last 15 years employing tens of thousands of people, in an extremely vulnerable location. The IT Expressway, a major component of the high-tech corridor, has been built along a narrow coastal strip of land that is exposed to environmental risks, including severe climate-related water vulnerabilities (tsunami, rising sea level, saline intrusion in water tables).²⁴ Is this a case of faulty planning or an unintended consequence of giving primacy to economic knowledge over other types of knowledge and information? Indeed, the location of the project on the southern periphery of the city makes perfect sense from the point of view of agglomeration economies, as it creates a continuum with the relatively affluent neighbourhoods of South Chennai (Adyar, Thiruvanmiyur, Velachery), where several good quality education and research institutions are located (e.g., IIT-Madras, Institute of Mathematical Sciences).

With regard to social risks, these are much less acute than in some other cases given that the area was sparsely populated. Agriculture and grazing activities were limited, although not absent and probably important for sustaining low-income households. However the presence of two

large relocation colonies, where evicted slum dwellers or people left homeless after the 2004 tsunami have been 'rehabilitated', raises questions about socio-spatial segregation in this zone, in light of the intensive development of upscale residential and commercial property. Between these two extremes in terms of incomes and quality of the built environment, will there be opportunities for lower-middle income residents to settle here?²⁵ This is linked to the issue of market eviction for low-income residents, who may very well find themselves priced out of the housing market if current patterns of property development continue. This issue is of crucial importance in our Brazilian cases as well, a country where, like India, there are very strong social inequalities.

In the Porto Maravilha Project in Rio, for instance, the fieldwork report underscores the high social risks involved with this megaproject, especially for low-income families living in the favelas, slum tenements and homeless camps. A major concern is that the urban 'revitalization' at the heart of this project is leading to a rise in real estate values, with repercussions for rental prices. In the absence of a proactive housing policy that ensures that current residents can remain in the area, they will simply be priced out of the market and pressured to leave. This is the case both for the districts noted as 'charming' and 'historic' and substandard settlements. Although the Porto Maravilha Project includes specific social components intended to promote socioeconomic development, to "prepare people for the new employment and business opportunities that will emerge" and "strengthen civil society", preliminary findings suggest that the project's initiatives are mostly disconnected from the social reality of the port districts (cf. appendix 2).

In Arequipa the preponderant role played by a large transnational mining company in financing a large-scale infrastructure project for potable water and wastewater treatment brings substantial political risks to local government authorities, as it undermines their legitimacy, shows their inability to provide basic services and creates new forms of political patronage. But, as the fieldwork report points out, the political risks are actually present at a much wider scale, since the mining company accounted for 44% of the total tax income of Arequipa (both local and regional levels) for the period between 2005 and 2009 (cf. appendix 7). What then are the repercussions of such fiscal dependency on State capacity to act independently, for instance to impose environmental regulation on the company in order to mitigate future environmental and public health risks?

24 Cf. Roumeau 2012.

25 Cf. appendix 4.

3 Interpreting Preliminary Findings

In Durban there are both financial and political risks involved with developing the “aerotropolis” megaproject. The project involves a shift of investments to the northern edge of the metro region at the expense of other areas already identified as requiring public investment, and at the expense of building a more integrated city, which has been expressed as a key objective of the municipality. By supporting such a project, and, more broadly, by adopting a discourse on city development that relies on “world-class investment” municipal authorities run the political risk of losing support from city residents, a third of whom live in poverty (cf. appendix 8).

Concluding remarks

Before concluding this preliminary report, it is necessary to underscore the critical importance of land issues in the development of megaprojects, which by definition require large plots of contiguous land. In most of the cases studied, State agencies, situated at various levels of government, use their right of eminent domain or right of pre-emption to acquire real estate for the project, or assist private property developers in gaining access through various means. Our case studies document the processes by which land is assembled for megaproject development, with attention to the differential impacts on various social groups (e.g., landowners, renters, squatters). There is great variety across our cities, which reflect institutional variation (tenure regimes, civic rights, squatter rights), as well as less stable governing practices linked to particular ruling parties. In Lima, for instance, a comparative study of the manner in which the previous and current municipal

administrations are managing a high profile megaproject (Linea Amarilla – Via Parque Rimac) shows how a particular legal framework can be interpreted differently according to political positioning and practices. In Peru, the legal framework recognises rights for residents and communities who have built their homes after land invasions to benefit from compensation and re-location, in contrast to other national contexts.

A common point across cities was the importance of property development as a component of megaprojects. Under growing pressure to stimulate growth and generate employment, municipal leaders increasingly seek partnerships with private sector actors, who are interested in reaping profits not necessarily from the core infrastructure project but from downstream activities, usually commercial and residential property. This is how their collaboration is leveraged. Alternatively, public or semi-public agencies are allowed to engage in for-profit activities to finance infrastructure. For instance, in Delhi, the Indian Government mandated the agency in charge of building the metro to generate profit from property developments in the highly regulated land market of Delhi’s metropolitan area.

As mentioned above, rising land values is a key issue with major social impacts. Also relevant in some cases is the question of bringing land into the market that was not previously available. In India, for instance, much land is not in private hands, and hence *de facto* in the custody of the State. In the case of common property, user-rights are more or less legally enforceable, and local or national governments can choose to sell the land without necessarily compensating those with user-rights.



Appendices: Summaries of Fieldwork Reports for WP2 Case Studies in Brazil, India, Peru and South Africa

Appendix 1: Garulhos in Greater São Paulo

Appendix 2: Rio de Janeiro

Appendix 3: Salvador

Appendix 4: Chennai

Appendix 5: Delhi

Appendix 6: Kalyan

Appendix 7: Arequipa

Appendix 8: Durban

Várzea do Tietê Park Project

Julia Andrade, Joao Carlos Monteiro, Eduardo Sombini

The Várzea do Tietê Park (PVT) Project is a large urban project involving eight different municipalities: São Paulo, Guarulhos, Itaquaquecetuba, Poá, Suzano, Mogi das Cruzes, Biritiba Mirim and Salesópolis. The project creating the PVT – announced by the São Paulo State government in 2009 as “the world’s largest linear park” – is officially incorporated into the water management policies for the São Paulo Metropolitan Region (SPMR).

The body responsible for its execution is the Department of Water and Electricity (DAEE) of the São Paulo State government. However it is also connected to complex urban planning questions such as informal settlements and selective land appreciation in areas of the metropolitan region.

Indeed the creation of the park may contribute to a significant sociospatial reconfiguration of the eastern sector of the SPMR, an area historically occupied by the working classes and known for its infrastructural problems and lack of urban facilities. The pattern of sociospatial segregation of the metropolitan region, in which the eastern zone traditionally appears as a space with a high concentration of poverty, dates back to the start of the 20th century. During this first period of accelerated urban expansion of São Paulo, higher income groups began to relocate to the area southwest of the centre where the new luxury housing developments were concentrated. The eastern region, separated from the historic centre by the seasonal floodland surrounding the Tamanduateí river, was ignored by the large property developers and primarily occupied by industries centred around the railway and worker settlements, followed later by low income housing. Thus urban expansion in this area occurred in fragmented form and without the implantation of an adequate infrastructure. The parameters of urban planning were systematically disrespected and the creation of public facilities and services has been ignored or overlooked by public authorities.

From the second half of the 20th century, the expanding urbanization of the eastern zone exceeded the borders of São Paulo and, following the same patterns of occupation,

reached municipalities like Guarulhos, Itaquaquecetuba, Ferraz de Vasconcelos, Suzano and Mogi das Cruzes. Growth of the conurbation during this period was driven by São Paulo’s industrialization: the SPMR had become the nucleus of the Brazilian economy and various neighbouring municipalities became the setting for large industrial complexes (especially Guarulhos, Osasco and the towns of the ABCD region). They also absorbed huge influxes of migrant workers, especially low-income earners who settled on the ever-expanding peripheries.

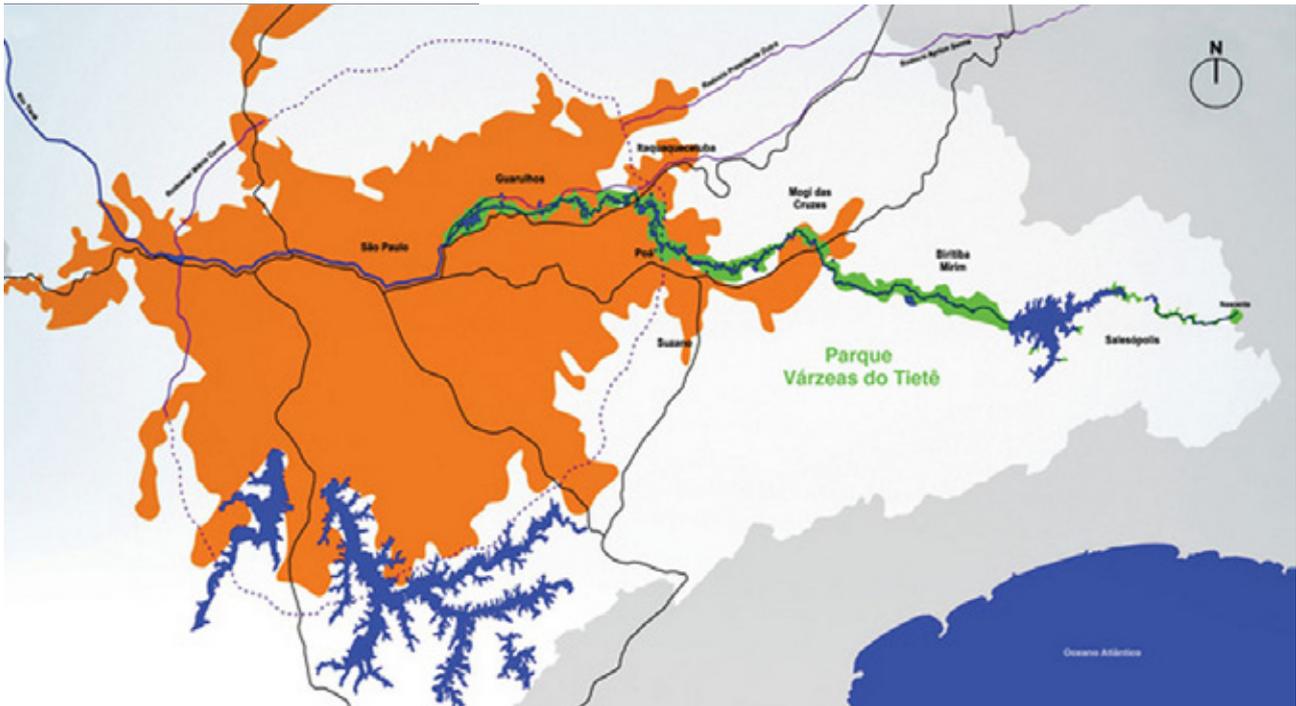
For much of this working class population, the only housing solutions available are self-built homes in the peripheral housing areas (most of them irregular) or living in favelas (generally located in areas protected by environmental legislation and subject to various risks). This pattern of urbanizations results in high densities of buildings and people, as well as the advance into the seasonal floodlands of the region’s streams and rivers.

It is in this sector of the metropolitan region that the Várzeas do Tietê Park is being implanted, a zone characterized by intense urbanization and low quality housing. Most of the area surrounding the park is occupied by low-income housing developments, several of them irregular, including land invasions and favelas. There are few green or institutional areas. Around the highways (Presidente Dutra and Hélio Schmidt) there are a large number of industrial plants and supply and distribution centres.

Tietê Ecological Park

In the 1970s the department began to work on a project for straightening the river upstream of the Penha dam, in the east zone of São Paulo. However the proposal was abandoned and the idea emerged of preserving the remaining floodland of the Tietê along this stretch. The creation of an ecological park therefore began to be discussed, spanning from the densely occupied area in São Paulo (Penha) to the municipality of Salesópolis, where the river rises. The implantation of a landscaping project was also proposed for the entire course of the Tietê in the metropolitan region, from the springs to Santana do Parnaíba, totalling 86 km.

The ecological park in the east zone was devised to preserve the floodable areas of the river, avoiding the

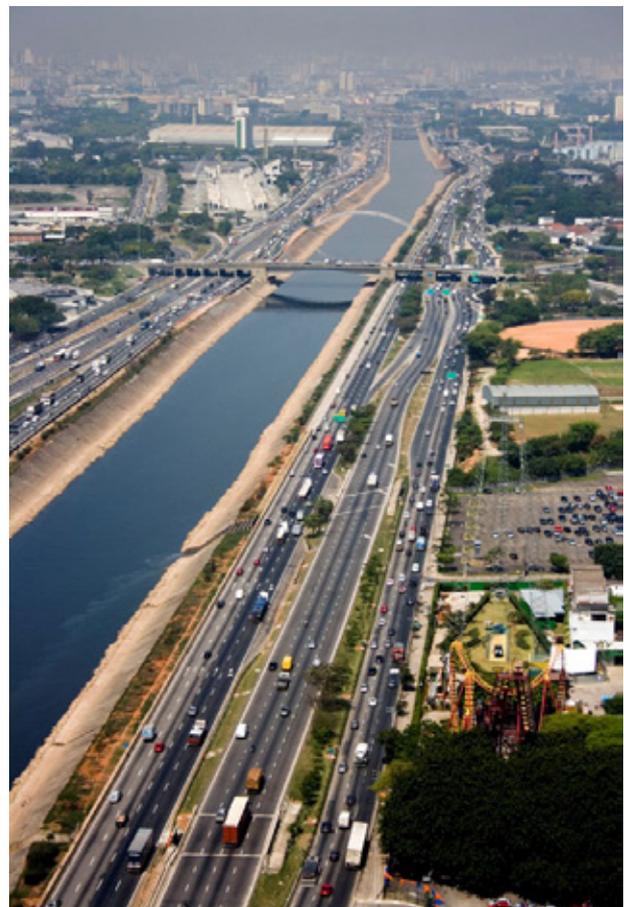


■ 31 – Urbanized area of the SP metropolitan region (in orange) and area designated for the implantation of the Várzeas do Tietê Park (in green). Source: DAEE.

same kind of occupation found along the other stretches of river and allowing water retention during periods of high water levels with the aim of regulating the flow on the river's upper course, reducing flooding on the Marginal Tietê expressway. As well as this hydraulic role, the park was conceived as the main green and leisure area in the eastern zone, otherwise lacking in open spaces, with various support nuclei planned over the course of implanting the project.

In 1976, the creation of the Tietê Ecological Park (PET) involved the expropriation of land for the installation of the first nucleus (Engenheiro Goulart). That same year the architect Ruy Ohtake was hired to coordinate the landscape project for the whole park. In 1979, the Ilha do Tamboré leisure complex was inaugurated in Barueri and the Engenheiro Goulart nucleus was completed in 1982. The latter nucleus alone receives more than 60,000 visitors every weekend.

During the 1980s, however, much of the funding planned for the park's implantation was suspended. The hydraulic works projected for the area were completed, but the expropriation of lands around the river for the implantation of leisure complexes was interrupted, meaning that the park was unable to be implanted in full. Indeed many of the districts that today find themselves within the perimeter of the Várzeas do Tietê Park and that are being threatened by removal were



■ 35 – Aerial view of the Marginal Tietê expressway after road widening.

created during the second half of the 1980s with the active participation of the public authorities. In the 1990s with the worsening of floods, both the State government and the São Paulo City Council began to implement works to alleviate the problem. Two main strategies were adopted: the construction of artificial lakes in the sub-basin headwater regions in order to retain part of the volume of rainwater during the most critical periods of the year; widening of the Tietê channel, into which all the basin's water drains, increasing the flow and reducing flooding.

At the start of 2009, the State government presented a mega-project for widening the lanes of the Marginal Tietê expressway – a project that became known as the **Nova Marginal**. In fact reform of the expressway had been discussed since 2006: initially the proposal was to separate the urban traffic from highway traffic, introducing toll booths on the expressway, but the idea was abandoned.

The 2009/2010 road widening works, undertaken without public discussion in the pre-electoral period and heavily criticized, created a semi-expressway section, increasing the number of lanes from 7 to 10 along most of the route. In order for the new lanes to be built, the permeable area of the verges had to be eliminated. An area equivalent to 19 football pitches was impermeabilized for the construction of the new lanes. As a result the work was obliged to pay the world's largest ever environmental compensation.

The project was initially budgeted at R\$ 800 million in 2008, according to the *Jornal da Tarde* of 10/07/2011. However a series of delays ensued and the planned expenditure was exceeded. Although the total cost has never been divulged, it is estimated that approximately R\$ 1.86 billion were spent widening the expressway, an increase of more than 75%. Even a year after its inauguration, the outlays continued and more than R\$ 200 million was passed via the agreement between the São Paulo State government and City Council in July 2011.

The environmental compensation established by the Municipal Environment and Sustainable Development Council (CADES) of São Paulo City Council stipulated that the trees from the avenue's verges (vegetation that had been planted years earlier by the State government itself) should be replanted, combined with the planting of 147,000 new seedlings in the districts bordering the expressway, as well as investments in creating the Várzeas do Tietê Park. This is the context in which the park was announced in July 2009.

Project content

After approval of the PDMAT and the works for widening the channel of the Tietê river, the State government's attentions turned to the floodlands of the eastern sector of the SPMR. The start of the project *preceded* the official announcement by at least a year and a half. According to information from the DAEE, the architecture and urbanism project and the preliminary environmental and social studies were commissioned in December 2007 and delivered in April 2009 to the cost of R\$ 5.2 million. The declared objective of the project is to create a linear park containing:

- 33 leisure and sports nucleuses across the Tietê floodland area,
- An area 75 km in length and 107 km² in area between the municipalities of São Paulo and Salesópolis,
- The construction of 230 km of cycleways and an internal avenue – a park road – that will allow cars to access the nucleuses,
- Recomposition of 360 hectares of gallery forest and environmental recuperation of the floodland area.

The amount initially budgeted for the project was R\$ 1.7 billion. It is divided into 3 stages: the first covers the municipalities of São Paulo and Guarulhos (completion forecast for 2012). The second, the municipalities of Itaquaquecetuba, Poá and Suzano, and the third the stretch between Mogi das Cruzes and the river's headwaters in Salesópolis (completion 2016).

During this period of elaboration, there are no reports of any form of popular participation or even access to information for the groups directly affected. In October 2008, prior even to the finalization of the landscaping project, the State government submitted a proposal letter to the External Financing Commission (COFIEIX) of the Ministry of Planning, Budgets and Management, requesting authorization to take out a loan of US\$ 115 million from the Inter-American Development Bank (IADB). This indicates that although an intervention project had yet to be completed and no public discussion had been held, the State government had already taken the decision to contract an international loan to implement the work.

The preliminary environmental diagnosis was undertaken during the second half of 2008. Next the hydrological/hydraulic study was commissioned in December 2008, concluded in December 2009. In May 2009 the DAEE signed an agreement with DERSA (the State company responsible for widening the Marginal Tietê expressway) for executing a section of the park road and



cycleway and the planting of 63,000 seedlings in the municipality of São Paulo, actions that form part of the environmental compensation for the work.

In June 2009 work on the Jacuí nucleus began. This involves another environmental compensation initiative for a large road construction. The first 15 km of the park road and cycleway were also started. The public presentation of the project, however, was only held on the 20th July 2009. In a ceremony in the Tietê Ecological Park, the State governor José Serra signed a protocol of intent with the mayors from the 8 municipalities involved.

Conflicts and obstacles: events and dates

The formal start of the project was December 2007 with the commissioning of the landscape project for the park. The work started in the second half of 2009, soon after the official announcement. In July 2011 the State government signed the loan contract with the Inter-American Development Bank (IADB) for executing the project. Till date, there are no records of private investments as of present.

The biggest difficulty involved in implementing the project is clearance of the area. It is estimated that more than 5,000 families will be evicted from their homes. However there is no public policy offering a secure alternative for this impoverished population today living on the shores of the Tietê. What the State government and São Paulo City Council have been bargaining is provision of a housing subsidy worth R\$ 300. However in practice this device does not work since the rental market is highly susceptible and when demand increases abruptly, the prices charged rise sharply. Indeed the vulnerability of the rental market prevents this impoverished population from receiving any assured form of assistance. What can be observed is that families who have received the benefit are unable to rent another home with this small amount and end up returning to their old homes.

Popular participation

The way in which the State government has been conducting the implantation of the park has come under criticism from diverse sectors of civil society. At the time when the park was announced, the groups involved in opposing the project for widening the Marginal Tietê expressway accused the State government of using the media to promote a project that had never been finalized in order to divert public opinion and generate news reports favourable to the administration.

Since 2009 professional associations, specialists, environmentalists and social movement leaders have been denouncing the government's lack of transparency in elaborating the project and implanting the park. Indeed the DAEE never made public the landscaping project and the other technical studies that supported the creation of the park, contributing little for the general public to gain access to government information. Neither did it hold any open sessions to discuss the content and strategies for implanting the park, such as public hearings in the affected municipalities. The DAEE presented the general outline of the project in a small number of hearings, always convoked by other institutions (such as the State Legislative Assembly) and made a few presentations to community leaders.

The main point of dispute concerning the project is, though, the question of the evictions (“involuntary relocations”) from favelas and irregular housing developments, as well as the alternative housing that should be offered to these residents. Leaders of residents associations (from Jardim Pantanal in particular) accuse the State and municipal governments of using scare tactics – psychological pressure and intimidation – on local inhabitants, forcing various families to accept inadequate compensation payments to leave their homes. The lengthy back-history of disrespect for the right to housing (as well as various other rights enshrined in the Brazilian and international legislation) of low-income populations in the case of large-scale public works in São Paulo provokes suspicions and considerable insecurity among residents.

The opposition parties and their political groupings in the legislature (though small) have also played some part by introducing agendas critical of the projects. Here it is also worth noting the Inter-American Development Bank itself plays an important role: though fairly controversial, the institution's policies concerning the resettling of the affected population may curb more serious breaches of the right to housing of the families subject to evictions.

Preliminary analyses

Although the park is not included into any high-profile policy for the urban marketing of São Paulo, the project is clearly connected to strategies for spreading a positive image of the metropolitan region. The project employs the rhetoric of modernizing the region, combined with preservation of the environment: at the symbolic level there is an attempt to project the metropolis as an area undergoing constant development (where the large highway projects appear as the main emblem of this process) but that simultaneously preserves environmentally sensitive areas and invests in the creation of green spaces and parks.

Two elements are also present here: the emphasis given on improving the population's "quality of life" (the new green areas of the park appearing here as a breathing space for the densely occupied city and relief from the rapid pace of daily life) and also the attempt to show that the "errors of the past" have been overcome and, at the start of the 21st century, the urbanization of São Paulo is guided by a new paradigm in which the city dialogues with the 'environment' rather than competing with it ('respect' for the river's floodland, occupied by the road system in earlier decades, is now the contemporary signal of this new relation).

Analyzing the original project for creating the park (from the 1970s), we can note that a more socially engaged proposal existed back then. The interdisciplinary team at the time conceived the park as a large green area, but also as an axis of public facilities and services. The nuclei were conceived by the geographer Aziz Ab'Saber and other specialists as community centres that would encourage social interaction in these peripheral districts. The leisure areas were located next to libraries, auditoriums, museums, environmental education centres, meeting spaces and so on. Hence the project from this period included a very strong local dimension, even though it had emerged from a metropolitan policy for water management.

In the 2000s, by contrast, the newly elaborated project pays little attention to strategies for promoting citizenship. The emphasis is aesthetic and environmental: functional preservation of the floodland (to avoid flooding) and the creation of leisure areas. Museums and environmental education centres are planned, but without the content of the earlier project. At the same time, the park seems to be aimed outwards, functioning much more like a mega-project designed to renew the image of São Paulo and the

political strategies of the party promoting the initiative than as a set of interventions targeted at the population of the eastern zone of São Paulo and the neighbouring municipalities. Hence it is worth remembering that although the overall size of the park is similar in the projects in the 1970s and 2000s, only in the latter case has it been presented from the outset as "the world's biggest linear park," demonstrating the intention to generate publicity. The mass clearances from low-income districts also show how the park is much more related to wealthier classes than the daily life of the resident local population.

Here it is worth making a final point about the symbolic value of mega-projects with ecological appeals. The logic of producing consensus that surrounds these large works requires that the projects appeal to a "common good" that is difficult to oppose. This dimension has already been analyzed in the national literature (Arantes 2002, Vainer 2002, Andrade 2007). Investing in green spaces and sports and leisure areas therefore tends to provoke little opposition. The very logic of the marketing is explicit: an image that improves the value of the brand must be positive. Hence cultural or sports products are seen to give an immense value to company or city brands. This is how cultural and sports marketing works to the benefit of corporations and urban marketing alike (Andrade 2001).

Consequently the creation of urban parks designed for leisure, ecology, practicing sports (cycleways, multisport courts) and culture are highly unlikely to be opposed, even when entire neighbourhoods are cleared for this purpose, evicting residents who built their own houses over decades, and allowing the sale of equipped public spaces and green areas to the private sector in the zones surrounding the new facilities.

Porto Maravilha Project

Julia Andrade, Joao Carlos Monteiro, Eduardo Sombini

For centuries Rio de Janeiro's dock area was one of the main seaports in Latin America. In the second half of the twentieth century, the relocation of the country's economic nucleus to the State of São Paulo and the technological transformations in maritime transportation led to a decline in the region's port activity and intense transformations in the area's urban fabric. The port districts became 'islands' disconnected from the rest of the city, a process caused by the highway ideology which transformed the docklands into a mere highway corridor linking different parts of Rio de Janeiro's metropolitan region.

This process led the public authorities to divert investments away from the port neighbourhoods, which was accompanied by the disinterest of the real estate market and the middle and upper classes for the region. The port zone became consolidated as a housing space for low-income populations, who make use of the economic vacuum and relatively low land values to meet their housing needs. Since then this space has been typified as a 'decayed' and 'rundown' zone by the public authorities and the media. A series of 'revitalization' projects have been elaborated over the years, although often criticized as inappropriate.²⁶ The current proposal, the **Porto Maravilha Project** (PPM), stems from the combination of various business interests. This conjunction of 'opportunities' needs to be made explicit if we are to understand the combination of forces backing this large-scale project.

Urban entrepreneurship

In the 1980s, the city of Rio de Janeiro went through an intense period of economic decline, paralleled by a worsening of the so-called 'urban problems': an increase in the rates of violence, growth of favela and informality. From the 1990 onwards, the response to this "urban crisis" involved the alignment of the municipal government's

management practices with a business administration logic. In this context of urban entrepreneurship, the Rio de Janeiro City Council began to promote city marketing, intra-urban competitiveness and the search for a prominent position in the global city ranking as ways of promoting economic and social development. Among the various initiatives linked to this logic, we can cite:

- The creation of the Strategic Plan for the City of Rio de Janeiro, elaborated by a Catalan consultancy firm in 1993;
- The installation of the Rio Teleport, inaugurated in 1995;
- The proposal to construct a branch of the Guggenheim Museum, which would be designed by the architect Jean Nouvel, in 2001²⁷;
- The failed attempt to host the 2004 Olympic Games;
- The successful candidacy to host the 2007 Pan American Games.

At the start of the 21st century, Rio de Janeiro's economy grew rapidly, driven primarily by oil exploration off the State's coast. The arrival of President Lula to power in 2003 and the consequent implementation of an interventionist economic policy, allied with a favourable international setting, helped ensure the continuation of this positive scenario for the local economy.²⁸ Eduardo

²⁷ The municipal government would have spent around US\$ 200 million on the building alone, as well as US\$ 12 million for the project by the French architect Jean Nouvel, US\$ 24 million annually for the use of archives, consultancy and use licenses linked to the Guggenheim brand for 25 years and another US\$ 3 million invested in viability studies for the museum in Rio. Additionally the foundation demanded financial guarantees, such as upfront payment of US\$ 124 million for the use of services (brand use, consultancy, archive loan) for 10 years.

²⁸ It is important to note that Rio de Janeiro has always played a prominent role as the headquarters for large State companies and organizations, such as Petrobrás, Eletrobrás, the National Economic and Social Development Bank (BNDES), the Brazilian Institute of Geography and Statistics (IBGE), among others. Under the Lula government, these institutions were strengthened and the investments made ended up having knock-on effects for the local economy.

²⁶ In the 1990s, the teleport was implanted in another area of the central zone with the objective of revitalizing the Cidade Nova district.

Paes's turn as mayor of Rio de Janeiro from 2009 onwards further consolidated this with the formation of public-private partnerships (PPPs) in different sectors, the creation of Large Urban Projects (LUPs) and the adoption of a 'zero tolerance' policy²⁹ for so-called 'irregularities.'³⁰

Property market

In Brazil the expansion of the real estate activity is capable of producing large impacts on the domestic economy, activating different layers of the country's production chain. Historically the expansion of housing loans has been used by the Brazilian State as a classic Keynesian solution to dampen the effects of economic downturns caused by negative fluctuations in the global economy.³¹ Indeed this strategy has once again been used in response to the recent world crisis: the launch of the My Home My Life (MCMV) program in 2009 has enabled a huge injection of resources into housing construction.

In Rio de Janeiro, where there is a scarcity of land in wealthy areas, causing an astronomical rise in land values, the PPM was highly welcomed by the property market. There is a lack of available land, too, in the city's central business district (CBD), a high rate of occupation of commercial buildings (over 90%) and a large demand for AAA standard offices. The PPM emerged as an opportunity to 'unlock' a large area of Rio's urban centre, which for decades had been on the margins of the property sector's activities, creating a new frontier for expansion of the city.

Large construction firms

As well as expansion of the property market, the PPM includes a large number of building projects that are stimulating the civil construction sector. The Porto Novo Consortium (CPN: Concessionária Porto Novo), winner of the tender from which the PPP originated, is formed by the companies Odebrecht, OAS and Carioca Engenharia. These firms will be responsible for the project's main construction works.

These companies appeared in 1st, 5th, and 17th place respectively in the ranking of the largest Brazilian construction firms in 2011,³² working on a variety of infrastructural projects. It is worth recalling that civil construction companies have considerable economic and political influence in Brazil, being the principal donors to electoral campaigns at all levels of the federation. At the municipal level, large construction firms possess an enormous influence over the development of urban policies and deciding where public funds are to be invested through the creation of infrastructure or reurbanization programs.

Curiously, one year prior to the announcement of the PPM, this same pool of companies had presented the City Council with an "urban development report" that was later reproduced almost in its entirety in the structural design of the agreed PPP (Public-Private Partnership). As we shall see, a similar case occurred in Salvador with the same construction firm, OAS.

Major sporting events

Undoubtedly the biggest business opportunity that made the PPM possible was Rio de Janeiro's successful bid to host the 2016 Olympic Games and to act as the base for the 2014 FIFA World Cup. The need to cater for these festivities involves enormous public and private investments in the construction or reform of sporting facilities, transport networks (the construction of a new metro line and a series of express bus corridors), new hotels to meet the shortfall of 8,000 rooms, and so on.

The agents involved in the project advertise Rio's port zone as the "main gateway to the city," where ocean liners filled with tourists will dock and where journalists and athletes will circulate. This space, they argue, "decayed and shaming of Rio's population," needs to rise to meet the social, cultural and economic effervescence of this new historical moment, "Rio's decade" as it has been dubbed. The revitalization of the port zone has ceased to be a political whim, as it was treated a decade ago when the construction of a branch of the Guggenheim Museum was cogitated, becoming instead a "necessity".

Alignment between the different government levels

Another determining factor that helped shape the PPM was the unprecedented agreement between the municipal, State and federal authorities. Since Brazil's return to democracy in the 1980s, the party alliances at these levels

29 In December 2009 the former mayor of New York Rudolph Guiliani visited Eduardo Paes to discuss the experiences and results of the 'zero tolerance' policy in the two cities.

30 Unlicensed street vendors, unofficial parking attendants, unlicensed transport, building work undertaken without planning approval, street dwellers, unauthorized advertising, 'disorder' in public spaces, and so on.

31 In the 1970s, at the peak of the crisis in international capitalism, the expansion of property market activity had already been used with this aim.

32 According to the ranking produced by the Brazilian Construction Industry Chamber.

never coincided politically in Rio de Janeiro. This confluence of interests only became concrete in 2009 when Eduardo Paes was elected city mayor, supported by President Lula and the State Governor Sérgio Cabral. This alignment between the three government levels was essential to designing the political and financial strategies needed to support the numerous urban investments under way in the city, including the revitalization of the port zone. The alignment of interests also ensured a solution to one of the main problems that had made any intervention project in the port zone impossible: the land ownership issue. Within the perimeter of the project, 62% of the lands belong to the federal government, 6% to the State government, 6% to the municipality and 26% to private ownership. The distinct interests in the area had made the execution of earlier projects a political equation difficult to solve, irrespective of the scale of the proposed projects.

Project Content

The PPM was promulgated on November 23rd 2009 by Municipal Law 101, which created the Urban Operation Consortium of the port region of Rio de Janeiro, with a view to promoting “the urban restructuring of the AEIU [Area of Special Urban Interest] through the amplification, interconnection and restoration of the spaces for free public use in the port region, looking to improve the quality of life of its current and future residents and the region’s environmental and socioeconomic sustainability”. This law authorizes the increase in the region’s building potential, permitting construction beyond the current limits (with the exception of conservation areas, cultural and architectural heritage areas, and buildings intended for public services). Consequently buildings up to 50 floors in height can be constructed in some areas of the project. In order to undertake construction projects that exceed the original size, those interested must purchase the Additional Building Potential Certificates (Cepacs). The revenue obtained from the sale of these titles will be invested in the works included in the project.

During the auction of the Cepacs, held in June 2011, R\$ 3.5 billion was raised from the sale of the almost 6.5 million titles made available. All the certificates were sold by the Porto Maravilha Property Investment Fund, created by the Caixa Econômica Federal (CEF) with the resources from the Government Severance Indemnity Fund (FGTS).³³ The

³³ Instituted in the 1960s, the FGTS is a public fund composed of a set of resources raised from the private sector and administered by the CEF (Caixa Econômica Federal) with the main purpose of providing support to workers. Its revenue is generated by a 8% tax contribution on company payrolls. The FGTS is one of the main funds responsible for investments in the housing, sanitation and infrastructure sector in Brazil.

speed with which the Cepacs were sold meant that construction work was able to move ahead of schedule and the conclusion of the PPM, initially planned for end 2016, was rescheduled for late 2015.

The project was divided into two phases:

- Phase 1: construction work receiving direct funding from the City Council, around R\$ 350 million, carrying out work on a dozen roadways, mainly in the Morro da Conceição and the area surrounding Mauá Square. Completed in 2011.
- Phase 2: receives private funds from the Urban Operation Consortium to the sum of R\$ 7.6 billion. This investment is being targeted at the main highway and infrastructural works, constructed on the basis of the agreed PPP. Phase 2 began in 2011 and is due to be completed in 2015, prior to the 2016 Olympic Games in Rio.

Port Region Urban Development Company (CDURP)

The CDURP was created by Decree in 2009. It is a semi-public company, under municipal control, responsible for organizing the invitation for tenders that led to the agreed PPP. The company is today responsible for controlling the financial operation involved in issuing the Cepacs. The company mainly functions as the project’s “trade counter,” mediating between the different levels of government and business.

Porto Novo Consortium (CPN)

The CPN, formed by the construction firms OAS, Odebrecht and Carioca Engenharia, won the tender process that led to the PPP for the project. Its operation in the area began in June 2011 soon after the partnership, considered Brazil’s largest, was signed.³⁴ The consortium will be responsible for the following works:

- Construction of the PPM’s two main avenues (Via Binária and Via Expressa), each of which will have six lanes, involving the demolition of buildings and old warehouses;
- Construction of two tunnels that form an integral part of these avenues;
- Construction of two viaducts;

³⁴ The federal law regulating the creation of PPPs was passed in 2004 by President Lula.

- Construction of a tunnel in the Morro da Saúde district and widening of an old railway tunnel in the Morro da Providência district;
- Construction of the trackway for the Light Rail Vehicle (LRV) to be implanted in the future, and which will link the port zone to the rest of the central zone;
- Demolition of a viaduct (Perimeter Overpass), one of the city's busiest routes, considered by the project's agents to be a major obstacle to revitalization of the port zone.

As well as the major highway and infrastructure works, the consortium is responsible for various services, including street lighting, street cleaning, maintenance of parks and gardens, repairs of roads and sidewalks, highway safety and traffic signs for a period of 15 years. The funds financing the CPN's work come from the sale of the Cepacs.

The project covers a continuous area of 5 million m²,³⁵ including three entire districts – Saúde, Gamboa and Santo Cristo – and sectors of three other districts – São Cristóvão, Centro and Cidade Nova. The resident population is around 30,000 people, mostly low-income families.³⁶ Located within the perimeter of the project and immediately bordering the area are important elements of Rio de Janeiro's metropolitan nucleus. The region is also considered strategic due to its proximity to the city's two main airports: Galeão (11 km) and Santos Dumont (2 km). The area within the PPM also includes: the deactivated suburban train station, Barão de Mauá Station, the future high speed train station that will connect Rio de Janeiro to São Paulo and Campinas and the piers used by transatlantic ocean liners to moor.

The construction works are planned to attract private investments to the region: office and residential buildings, educational establishments, leisure and entertainment business, service sector companies, hotels and so on. The expectation is that the number of residents will rise to 100,000 people (30,000 new residential units), as well as 800,000 daily users. The public authority is expected to raise R\$ 200 million in taxes generated in the area in 2014.

Social Aspects of the Project

Two specific projects form part of the social counterparts of the PPM: the Cultural Porto Maravilha and the Citizen

³⁵ By way of comparison, this area is twice the size of the emblematic revitalization project for Porto Madero in Buenos Aires (Argentina).

³⁶ The Human Development Index (HDI) for the port districts is 0.775, one of the city's lowest, ranking twenty-fourth among the 32 administrative regions.

Porto Maravilha. The objectives announced are: "to coordinate government actions and partnerships with the private sector in order to stimulate and support initiatives that promote the socioeconomic development of the population living today in the region and the valorization of its heritage," "strengthen the region's civil society," "prepare people for the new employment and business opportunities that will emerge" and establish "contacts with institutions and companies that operate or are interested in operating in the area, through their social responsibility programs." The interventions included in these projects are funded by the sale of the Cepacs: it is anticipated that 3% of the amount raised by the sale of the titles will be invested in the two projects. Both are coordinated by the CDURP and are supported through partnerships with other municipal bodies.

Cultural Porto Maravilha

This project promotes initiatives that "valorize the archaeological, historical and tangible and intangible cultural heritage of the region." At present two lines of action stand out: the creation of the Historical and Archaeological Circuit Celebrating the African Heritage and the reform of the Gamboa Warehouses.

Citizen Porto Maravilha

The project's objective is to promote "housing improvements, capacity building and professional retraining, entrepreneurship, citizenship education and the production and diffusion of knowledge." The project's "social commitments" include:

- Creation of housing of social interest;
- Installation of crèches, Emergency Care Units (ECUs) and schools;
- Integration between the different means of public transport;
- Recuperation of the area's environmental quality;
- Generation of direct and permanent jobs in the region;
- Regularization and formalization of economic activities;
- Professional training;
- Support for community development initiatives.

In general, the Citizen Porto Maravilha project has been limited to the creation of "citizenship actions" through the temporary installation of marquees in Harmonia Square, Gamboa district. The actions were given the name



HarmonizaÇÃO (Harmoniza(C)TION). These events promote workshops on recycling and dengue prevention as well as providing fluoride applications, vaccinations, copies of official documents, registration of families on social programs, hairdressing, cosmetics and so on. Help desks are also set up to allow residents and local traders to renegotiate debts owed to public bodies (IPTU property tax debts) and service providers (Light electric company). The actions of the Cultural Porto Maravilha also encompass sports parks and volunteer work parties for planting tree seedlings.

Preliminary Reflections

In the short period of three years since the project's launch, many transformations can already be observed. The urban landscape is being profoundly transformed, the local traffic altered, streets closed for construction work, circulation of heavy-duty vehicles and entire street blocks covered in scaffolding and tarpaulins. But the transformations that call our attention relate to the impacts that are affecting primarily low-income families living in the region's favelas, slum tenements and homeless camps.

Despite the official discourse, the project's initiatives are mostly disconnected from the social reality of the port districts and are being implemented in an authoritarian manner without dialogue with the population. Many residents talk about their contentment on hearing the proposals for 'improvements' reported in the media after the announcement of the project. In a context where the majority of the population has a low-income level, the promise of job creation and improvements in the quality of life was greeted enthusiastically. However the number of local residents employed in the construction work is low compared to the total. The series of "employment counters," created as part of the Citizen Porto Maravilha project, give preference to hiring residents from the region but, according to those responsible for the project, the low qualification level of the prospective workers is an impediment.

Another demonstration of the gap between the project's actions and the reality of local residents can be found in the proposed transport projects. The discourse legitimizing the project also asserts the need to stimulate tourism in the district. But when we observe the travel needs of the region's local residents, the route fails to correspond to reality entirely.³⁷

Some accounts of abuse of authority and disrespect of the right to housing have been reported over the last three years of the implementation of the PPM. The construction work undertaken by the PMC and the PNA (New Alternatives Program) are the main targets of denunciations.

Since 2010, there have been a series of evictions and removals perpetrated by the municipal government following the expropriation of run-down buildings or occupied by low-income families, clearing the way for the construction of new residential units enabled by the PNA through the funding received from the federal MCMV (My Home My Life) program.

In the absence of a housing policy that ensures residents can remain in the region, the market will simply focus unimpeded on the search for profits through land appreciation. Following this scenario, we can visualize in a near future the current residents increasingly being replaced by others with higher incomes.

Social participation in the project is practically nonexistent and the few meetings held by the CDURP with the residents were merely informative in nature. With the aim of opposing this steamroller, the Port Community Forum (FCP) was created as a space for local people to debate and demand their rights, formed by residents from the region, students and university lecturers, supported by the collaboration of the NGO Fase. Other participants include representatives from the samba schools who are affected by the project. In May 2011, the FCP produced the "Report on Rights Violations and Demands," denouncing the actions of the PPM. In October 2011 the forum issued a second document, the "Technical Report on Risk Areas in Providência and Pedra Lisa." Elaborated with the help of voluntary technicians, the report demystifies the technical report produced by the City Council, which argues the need for removal of half of the houses existing in the two favelas.

The scenario presented in the FCP's report is representative of what has been happening at various points in Rio de Janeiro, not only within the perimeter of the PPM. The transport infrastructure works and the construction of sports facilities for the mega-events to be held over the coming years are wiping out entire communities, reinforcing the traditional elitist and authoritarian pattern of segregation of the city's urban space.

37 The installation of cable cars on Rio's hillside communities is inspired by the supposed success of the Colombian experience of reurbanizing poor peripheral areas. In Rio de Janeiro the first cable car was built on the Morro do Alemão, but the route chosen fails to meet the transportation needs of the local population, leading to its underutilization.

Integrated and Participatory Regeneration Plan for the *Centro Antigo de Salvador* (Old Centre of Salvador)

Julia Andrade, Joao Carlos Monteiro, Eduardo Sombini

We begin by providing a brief description of the landscape of the area covered by this urban project. The Pelourinho, the name given to the region formed by the historic centre of Salvador, Bahia State, is an icon in Brazil when it comes to discussing models for regenerating central urban areas. It became widely known both for the concentration of a rich architectural heritage and for the successive actions implemented by local governments in the historic centre to revitalize it. During the governments of Antônio Carlos Magalhães (ACM) large levels of funding were invested in the area. Overall the projects looked to reform the public amenities (squares, fountains, churches), remove the resident poor population and prepare the centre as a palatable and attractive setting for tourist activities. There were seven stages of controversial reforms, today highly criticized, especially because of the deep social segregation caused. Consequently the area today is highly segregated with few spaces of low-income housing, though not completely unused by the poorer population.

What we find is a historic centre taken over by tourism. Despite complaints from public bodies and the population that the tourist flow has been diverted from this centre, it remains striking. Outside this tourist epicentre, heading downhill via the Lacerda Lift to the Cidade Baixa (Lower City), we reach the Port Zone, the Modelo Market, São Marcelo Fort and São Joaquim Fair. In this area the buildings are in a worse State of conservation and the police presence is more discrete. In 2009 a series of initiatives coordinated between different spheres of government began to set out new guidelines for the region denominated the CAS.

History of earlier projects

During the first decades of the 20th century, the central region of Salvador became increasingly occupied by the working classes precisely at a time when urban growth was valorizing new areas of the city's space. In the 1930s the Pelourinho was already inhabited by a low-income population

similar to the process that had occurred in the port region of Rio de Janeiro, where the relocation of the elites to new districts meant that the central and port regions became the destination for poor sectors of the population, dockworkers and prostitutes in their 'castles,' as the brothels were called at the time in Salvador. According to Oliveira (2002), in 1932 the delegate Tancredo Teixeira moved the prostitutes from the Rua Nova de São Bento, Beco Maria Paz and Rua Carlos Gomes to the Maciel region. Curiously this was the same strategy used in Rio where the authorities looked to segregate the poor and undesirable population in those districts unattractive to the property market.³⁸

In the 1960s there was an attempt by members of UNESCO and some Brazilian leaders to organize a mission to help structure policies for preserving and valorizing Brazil's historical heritage. Various historical sites were visited at the time, among them the Pelourinho. As a result of this process, the Artistic and Cultural Heritage Foundation of Bahia was created in 1967 to direct the project of restoring, conserving and exposing the State's heritage. In this period the mainstay of the project was already the pairing of tourism and culture. In other words, the desire was to develop a historical centre with bookstores, art cinemas and museums alongside typically Bahian hotels and restaurants to meet tourist demand, especially international.

The historical centre that had primarily been used for housing over these decades began to be the focus of a regeneration policy aimed primarily at tourism with policies directed towards cultural and leisure facilities. The plan was divided into seven stages corresponding to separate intervention areas. The main focus was the occupation of the rundown townhouses. Three kinds of solutions were offered to the residents: compensation, definitive relocation and temporary relocation. According to official data, in the first stage (1992-1993) 399 families were paid compensation, 26 families relocated and 79 small businesses closed and paid compensation. In the second stage (1992-1993) 176 families were compensated and 16 relocated, plus 18 small businesses were closed and paid compensation. In the third stage (1992 – 1994) 374 families were paid compensation and 58 small businesses closed, while no families were relocated. In the fourth stage 1,018 families were paid compensation (official data from IPAC/Cander 1995). Some

³⁸ Franceschi (2010) maps the social formations found in the Mangue, Cidade Nova and Estácio region of Rio de Janeiro city.

years later Ana Fernandes (2006) provided data on the remaining stages. The fifth stage (1996) saw 67 families paid compensation, while data for the sixth stage (1997 – 2006) is non-existent and the process paralyzed for years. However, in the seventh stage (2006), more than 1,054 families were removed from the territory.

The physical and legal violence became notorious since the families lacked any kind of forum where they could complain of the small amount of compensation paid. There was also no mechanism for monitoring the fate of the evicted families. They probably went to occupy the Baixa do Sapateiro and Rocinha, areas that are now the focus of policies of the Old Centre of Salvador plan.

Only 9% of the overall set of reformed buildings were assigned to housing (Fernandes & Gomes 1995:48). Most of the buildings now restored by the State government have been leased as hotels, bars and restaurants. In this complex process begun in 2002, the AMACH (Association of Residents and Friends of the Old Centre) helped draw public attention to the violence taking place. That same year the Bahian State Public Prosecutor's Office filed a civil lawsuit with a request for a preliminary injunction against the State government and CONDER, describing the relocation process as "social sterilization." The IADB Monumenta Program itself suspended the payments for the seventh stage until the conflicts are resolved.

In summary, the implementation of the participatory formulation process for the current plan largely entailed this history of large conflicts, segregation and a process of gentrification in which 2,909 families were expelled from this small area called the Pelourinho.

Political scenarios

We can turn now to the actual Urban Project for the city, namely the Integrated Participatory Regeneration Plan for the Old Centre of Salvador. The project is proposed by the Reference Office of the Old Centre of Salvador (ERCAS). This project forms part of the so-called Seventh Stage of the Pelourinho Recuperation Plan and the IADB Monumenta Program and is closely coordinated with new federal government programs such as the Historical Cities PAC of 2009.

From 2003 onwards, though, and the Presidency of Luis Inácio Lula da Silva, the federal government adopted another line of social and urban policies. Firstly we can highlight the institutionalization of the Ministry of Cities itself, which began to coordinate and define public policy for the sector. The central areas in particular were also subject to a profound reorientation guided by the incentive

for mixed (commercial and residential) use of these central and historical districts. Consequently the current political scenario involved an Office that, despite being under the responsibility of a State government run by PT (the Workers' Party, the same party as the President), still retains many key features of the earlier policy of preventing the occupation of the area by poor sectors of the population since they "are incapable of covering the costs for maintaining the historical buildings" (Declaration of Beatriz Lima at the World Urban Forum, Rio de Janeiro, 23/03/10). At the same time we can note that even within the left-wing governments on the different levels there are sensitive conflicts over the project for central and historical areas.

At the national level a series of actions have been linked to the plan for the Old Centre of Salvador. On completion of the IADB Monumenta Program in 2009, the federal government created the Historical Cities PAC (*Programa Aceleração do Crescimento: Growth Acceleration Program*), specifically intended to design projects for this type of region. Various spheres of the federal government are involved, including the Chief of Staff Office, the Ministry of Tourism, the Ministry of Education, the Ministry of the Cities, Petrobrás and Eletrobrás, as well as BNDES (the National Economic and Social Development Bank), the Caixa Econômica Federal and the Banco do Nordeste.

At its launch, the Historical Cities PAC announced the investment of R\$ 692 million for the period from 2010 to 2013 in works to recuperate the historical architectural heritage. Its formulators announced that they did not intend to expel the poorer population living in the area. The focus on housing had two aims: it would attempt to meet the existing demands, but it would also seek to attract new residents to the Old Centre of Salvador. The Historical Cities PAC's institutional structure is based on a partnership between State and municipal governments. In the State of Bahia, 16 municipalities were covered by the program, Salvador being just one of them. In Salvador in particular the program promised the investment of R\$ 243 million over the period in 46 initiatives.³⁹ Not all the initiatives are contained within the perimeter of Salvador's historical centre.

39 1. Restoration of the Third Order of Saint Domingo Church, 2. Restoration of the Church and Convent of the First Order of Saint Francis, 3. Additional restoration work on the Our Lady of the Pillar Church and Cemetery, 4. Restoration and modification of the Berquó Manor, the headquarters of IPHAN-BA, 5. Restoration of the Amado Bahia Manor and its adaptation as a Technical Office for IPHAN/BA and a Sea Reference Centre, 6. Modification of the Terreiro da Casa Branca (Ilê Axé Iyá Nassô Oká), 7. Modification of the Terreiro do Bate Folha (Mansu Banduquenquê), 8. Construction of the Mobile Platform in the "Reggae Square" in the Largo do Pelourinho, 9. Modification of the Terreiro do Gantois.

Project date and origin

At the State level, the Bahia State Secretary of Culture (SecultBA) in 2007 created through State Decree 10.478 the Reference Office for the Old Centre of Salvador (ERCAS). This entity also functions as the Executive Secretariat of the Old Centre Managing Council. It was ERCAS that brought together the different levels of government and civil society to elaborate the Participatory Regeneration Plan for the Old Centre of Salvador in July 2010. It is precisely this plan to which we are referring as the **Large Urban Project (LUP)** for Salvador.

In 2008 the government of Bahia signed an agreement with UNESCO to provide training for SECULT/BA towards design the project. This agreement lasted two years. As well as this agreement, the process for elaborating the Regeneration Plan introduced a Technical Cooperation Agreement (TCA) institutionally connecting the three spheres of government. The Plan combined different lines of action at the national, State and municipal levels.

Attempting to construct an image distinct from the preceding policies, the plan adopted a participatory methodology with the organization of Thematic Forums that functioned during different stages of the plan, such as the evaluation of the diagnoses and analyses presented by the UNESCO consultants, as well as the discussion of the guidelines presented by ERCAS.

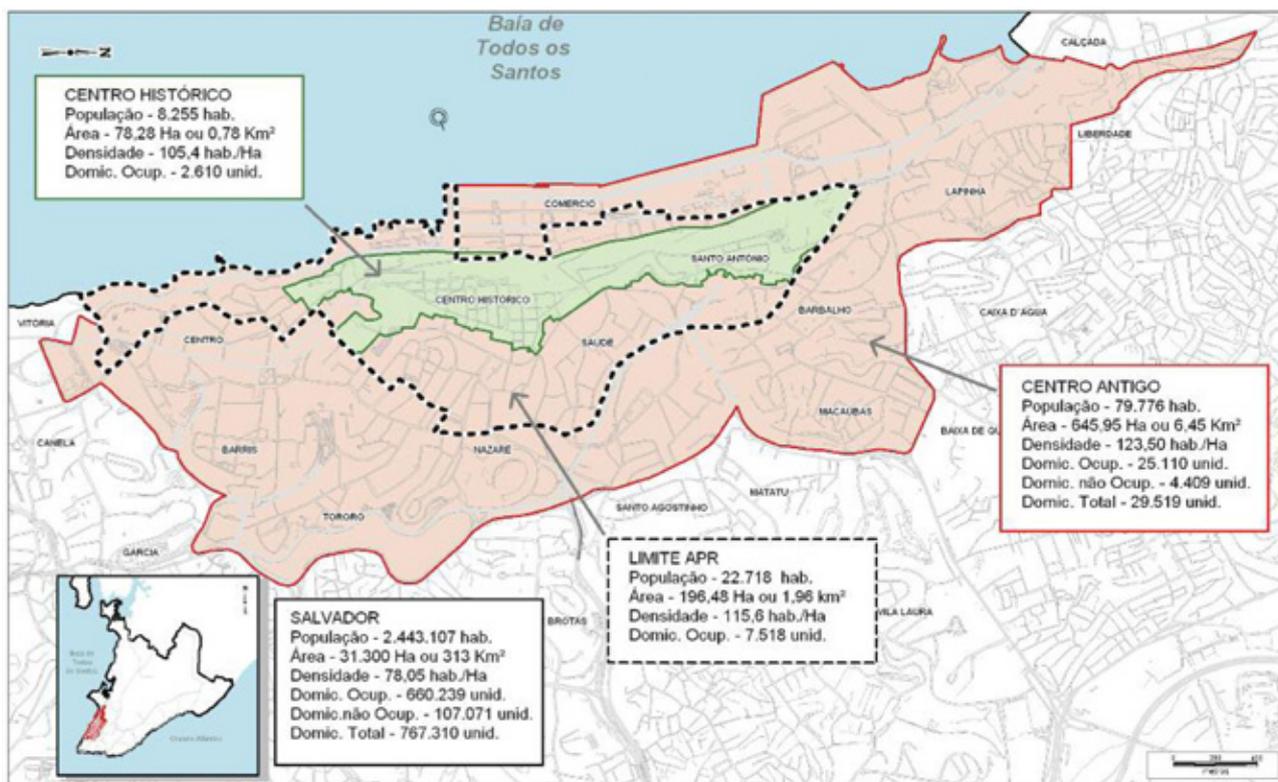
In 17 months (06/2008 to 12/2009) four meetings of the Thematic Forums were held, attended by around 600 people representing civil society, the public authority and the private sector. Entities like AMACH, UFBA and others were only included in the executive group during the Second Thematic Forum. The discussion process resulted in the establishment of 14 action guidelines, namely:

1. **Stimulation of economic activities.** The aim here is to attract the public and encourage the development of specialized trade in areas e.g., electrical and electronic equipment, antiquities, plastics and leatherwork, and the sale of nautical items and cultural activities.
2. **Increased competitiveness of economic activities.** On this point the plan's concern is to integrate and strengthen companies within the production chain by promoting training in management, accountancy, legal issues, finance and marketing. They argue that this dynamic may also be assisted by a solidarity economy providing stimulus to local cooperatives, integrating them into the market.
3. **Preservation of the hillside area and facades.** The proposal here is to contain occupations by low-income groups and to promote reforestation. It proposes landscaping – with the recuperation of native species – and improvement of the viewing spots located in the upper part of the city. In the hillside area 1,000 low-income habitations will be removed: according to the plans, these will be relocated to the central area.
4. **Incentives towards housing and institutional use.** Here the plan made a hard-hitting assessment of the causes of the demographic migration away from the centre, forgetting, though, that part of this migration was forced as we have related above. Nonetheless there is a clear intention to attract a 'new' middle class population to inhabit the centre.
5. **Galvanize the commercial district and revitalize the seafront.** Here there is more clear evidence of the intention to invest in valorization of the area. This involves the revitalization of the port, which occupies the entire seafront, with investments in its physical structure and support teams.
6. **Improvement of the cultural spaces and monuments.** In the official publication of the Old Centre of Salvador Plan, the text by Márcio Meirelles, Culture Secretary for the State of Bahia, possesses the following emblematic title: "A plan based around culture." Diluting the concentration of historical monuments and sites, and also stimulating the opening of more galleries, theatres, cinemas and antique shops.
7. **Structuring Cultural Tourism.** According to the proposal's formulators, culture and tourism are interconnected in the world's biggest cities. Hence the plan specifies that "it is important for the city to become competitive in the national and international market." With this aim in mind they intend to promote Salvador's tangible and intangible heritage, including its festivals, craftwork, cuisine and religious manifestations.
8. **Improvement of actions and services attending the vulnerable population.** The plan intends to deal with the 3,000 families living in a situation of vulnerability, that is, in slum tenements or in the area's ruins. This responsibility is shared with the private sector.
9. **Optimization of the environmental conditions.** Implantation of an environmental certification program and incentives offered by the government to trades and businesses in the Old Centre. The intention is to copy São Paulo's Clean City model.
10. **Recuperation of transport infrastructure.** These actions are focused on urban mobility. Funds to the value of R\$ 28 million have been received from the Ministry of Tourism to recuperate the main access roads to the Old Centre.

11. **Reduction of insecurity.** Implantation of the Centre Security Project elaborated by the Secretary of Public Security, in October 2008. The primary aim, though, is to develop a new image of the central zone through a ‘feeling’ of security. The community council will be reactivated and ostensive policing reinforced. They also intend to amplify the electronic monitoring centre already in operation in the city.
12. **Valorization of the Old Centre through heritage education.** Keeping the region attractive to the “eyes and hearts of the people.” The campaign uses a heart logo with the phrase: “The Old Centre of Salvador, the history of Brazil lives here.”
13. **Creation of the Bahia Culture Reference Centre.** The initiative will be based at the Rio Branco Palace. The Culture Reference Centre will work to promote cultural heritage. It will provide a welcoming portal for tourists and Bahians, allowing them to learn more about the Old Centre through modern technologies. The exhibition’s inauguration in June 2010 was attended by former President Lula.
14. **Management and implementation of the Regeneration Plan.** Create a public company to manage the architectural heritage and a Building Investment Fund. This action is presently the main focus of discussion with the community.

The delivery of the Participatory Regeneration Plan took place in July 2010 after two years of discussions and adjustments. During this time, work had already begun on building restoration and improvements such as street lighting and the reform of the Rio Branco Palace, which at the time of the Plan’s launch became the new base of the Bahia State government. A symbolic strategy with a high level of visibility.

The Plan is designed to regenerate what was named the Old Centre of Salvador, which encompasses both the Historical Centre and the Area Surrounding the Historical Centre. An area that includes 11 districts (Centro Histórico, Centro, Barris, Tororó, Nazaré, Saúde, Barbalho, Macaúbas, part of Espigão da Liberdade, Comércio and Santo Antônio), seven square kilometres and 80,000 inhabitants (a population about 40% smaller than that registered in 1970 according to IBGE).

**LEGENDA:**

- ▬ Limite Instituto do Patrimônio Histórico e Artístico Nacional - IPHAN, 1984
- Área de Proteção Rigorosa - APR
Lei Municipal 3.289/1983
- Área Contígua à APR - Lei 3289/1983

Centro Histórico - 78,28 Ha
Área da APR - 196,48 Ha
Centro Antigo - 645,95 Ha

SISTEMA VIÁRIO BÁSICO

- Meio Fio
- Vias Principais

PROJETO: REABILITAÇÃO SUSTENTÁVEL DO CENTRO ANTIGO DE SALVADOR

OCUPAÇÃO URBANA E AMBIENTE CONSTRUÍDO CONSULTORIA UNESO/SECULT ANGELA GORDILHO SOUZA (COORDENAÇÃO)

Mapa 1 - Centro Histórico e Centro Antigo de Salvador
LOCALIZAÇÃO E POLÍGONOS DE DELIMITAÇÃO, 1983 e 1984

PROJETO: REABILITAÇÃO SUSTENTÁVEL DO CENTRO ANTIGO DE SALVADOR
COORDENAÇÃO: ANGELA GORDILHO SOUZA
ELABORAÇÃO: ANGELA GORDILHO SOUZA
REVISÃO: ANGELA GORDILHO SOUZA

DATA: 19/08/2010
TÍTULO: MAPA 1

Private investments

Among the exclusively private investments we can pick out some examples that reveal the profile desired for this urban area. Announcing “accelerated works,” Cloc Marina Residence is a luxury housing development offering lofts, apartments and penthouses. The condominium with 128 units, along with a café, restaurant and leisure complex where a nightclub had operated previously, is located on Avenida do Contorno facing All Saints Bay. However the most audacious project is a development that was not announced in the Old Centre of Salvador Plan but that, everything suggests, could change the pattern of habitation in the region. This is a wealthy district called Santa Tereza that is being projected for the Avenida do Contorno and Carlos Gomes between Castro Alves Square and Ladeira dos Aflitos. This development is associated with the opening of the Hotel Fasano, work on which began in April 2012. Also set to be developed nearby is the Trapiche Adelaide, an extremely luxurious residential complex involving an investment of R\$ 32.4 million to build just 20 units. The value per meter squared of the apartments is budgeted at R\$ 7,900. It will have private moorings, reinforced security and an exclusive entrance, providing completely secure access. It will also have a full range of leisure facilities, including cinema theatres. The constructors – Empresa Imobiliária Eurofort Patrimonial and RFM Participações – announced that the rundown neighbourhood will soon become the most luxurious area of Salvador, seeking to follow the example of districts like Soho and Puerto Madero, as Armando Correia Ribeiro asserts.

Curiously on April 14th 2012 the *Jornal A Tribuna de Salvador* contacted ERCAS to discover more about how the construction work was going. ERCAS claimed that it had no information on the matter and that the initiatives had no connection to the Plan. However on April 26th the City Council announced the ‘audacious’ project at the Bahia Commercial Association, informing that the local government will invest in infrastructure to “improve the population’s self-esteem and create an identity,” as the secretary of Sedham, Paulo Damaceno, claimed. According to the latter, the complete project would be delivered in 2012, though he adds that the City Council will be responsible for constructing leisure areas, pavements and lighting within the exclusive perimeter of the new district. This aim in mind, the council will send the City Chamber a project to extend the Commercial District Fiscal Incentive law for another four years, including the sub-area of Santa Tereza. It is worth noting that even though the works for the future district have not yet begun, the Fasano, Cloc and Trapiche

Adelaide developments are already realities. Moreover, according to the newspaper *A Tribuna*, more than 45 large townhouses have already been sold to the company Armando Correia Ribeiro.

This episode leads to two observations. Firstly there is a potential weakening of ERCAS as an agent capable of coordinating policies for the area given that ERCAS is unaware of a project that the City Council (its partner) announced a few days later. Secondly we are dealing with local government mechanisms for investing resources and formulating policies that directly meet the interests of major real estate capital. Approving laws for incentives exclusive to the area (following the model of the Cepacs of Rio and São Paulo) to stimulate private initiatives is one of the facets of ‘corporate urbanization’ (Santos 1990) or the classic urban entrepreneurialism.

Low-cost housing

In the LUP for the Old Centre just one project was designed for the lower income classes already living in the centre of Salvador. The Rocinha favela was one of the locations that received precisely the poor families expelled from the Pelourinho during the 1990s with actions headed by the governor Antônio Carlos Magalhães. The favela is located behind the townhouses in high-risk areas with steep slopes. Sewage flows freely and there is no water supply: in other words, living conditions are highly precarious. The announced project promises to build a new district, which has received the name Vila Nova Esperança (New Hope Village). There will be just 66 low-income habitations to be built by Conder (Bahia State Urban Development Company).

According to the urban planner Ângela Gordilho Souza (one of ERCAS’s consultants), the region of the old centre of the capital possesses 1,100 abandoned buildings that could shelter 8,000 housing units. In the plan presented by the office, there is a promise to construct 9,000 new housing units with a budget of R\$ 6.4 million.

Preliminary reflections

Given the past history of interventions in Salvador, the ERCAS Plan took care for it to be constructed in a democratic way. In order to elaborate the plan, a participatory methodology was adopted, as developed by the SIRCHAL program (International Site on the Regeneration of Historic Centres in Latin America and the Caribbean). This methodology was based on the organization of Thematic Forums that functioned during



all stages of the planning process from the evaluation and analyses of the diagnoses, the analysis of proposals presented by the consultants hired by UNESCO and the analyses of the actions developed by ECRAS. This work continued until the completion of the plan. However during the implantation of the actions, it appears that this coordination work lost its impetus.

The actions of the City Council, for their part, are strongly inspired (and declaredly so) on the large-scale plans for Puerto Madero in Lisbon and the Porto Maravilha in Rio de Janeiro. In other words, models of urban entrepreneurialism that aim to transform the centre into middle class and elite districts, directly meeting the demands set by tourism, culture and leisure.

Chennai: The Information Technology Expressway Mega-Project

Labeled as an “IT corridor” by the Chennai 2nd Master Plan (2007), this case study is an example of a large-scale infrastructure project meant to support an export-oriented economic sector, IT software development and IT-related services. The project of the IT Expressway Limited (ITEL) aims at providing a “world class” (*ibid.*) road transport infrastructure between different IT locations (campuses) located in the southern outskirts of Chennai. This large-scale infrastructure project is meant to contribute to the diversification of the economic basis of Chennai in the domain of services, as the city was previously known as a port and industrial city cum major coastal commercial hub. Developing the IT sector aims at enhancing the international attractiveness of Chennai, since IT activities in India cater mostly to the international market, primarily to the US (Gol, 2012, p.1). From a spatial and urban perspective, this large-scale project affects the development of Chennai’s southern metropolitan periphery in a very specific manner, a fact that would seem to have been acknowledged recently by the extension of Chennai Corporation limits to encompass the project.

1. A road infrastructure to be the transport framework of an IT cluster in the making

Place of Chennai in the Indian IT sector

The IT-BPO sector [Information Technology – Business Process Outsourcing] generates roughly 6% of GDP in India, with an aggregate revenue of US\$ 101 billion for the fiscal year 2011-12 and a steady rate of growth (Gol, 2012, p.1). Chennai hosts approximately 90% of the total number of 350 000 employees in the IT and ITES [IT Enabled Services: e.g. call centres] sector in the southern State of Tamil Nadu, of which it is the capital city (Nasscom, 2011). Chennai is the third or fourth pole of IT (in exports value) in the country (STPI, annual reports), in competition with Hyderabad (State of Andhra Pradesh), following Bengaluru (Bangalore) in first place followed by the Mumbai-Pune corridor in Maharashtra. Chennai is identified as a pole for IT and ITES services. It hosts the headquarters of a couple of Top 10 Indian IT companies.

Timeline and outline of the project

The ITEL corresponds to the revamping of the first twenty kilometers of the Old Mahabalipuram Road that starts in Chennai’s southern periphery and extends towards the city of Mahabalipuram (also known as Mamallapuram), located at a distance of approximately 70 km to the South along the coast of the Bay of Bengal. This road cuts through a mostly agricultural landscape, with modest agriculture activity (salty and sandy soil, not very fertile) and little industrial development, as industrial development has historically been restricted in this area as it falls under a Coastal Regulation Zone (tsunami-prone area). In that sense this area represented until recently a reserve of underdeveloped, cheap rural land, occupied mostly by villages. Nevertheless this location benefitted from a potentially good location: the northern part of the road (in Chennai’s southern suburbs) is populated by educated middle classes and hosts many higher education and research institutions (including the prestigious Madras Indian Institute of Technology); it was connected to the West to Chennai airport by a 100 feet width road (allowing a bypass around the congested city traffic).

The Second Master Plan for Chennai Metropolitan Area 2026 (initially prepared in 1995, it went through revisions until finally released in 2008) developed a vision of urban development along corridors of circulation coupled with economic specialization. It is under this vision that Old Mahabalipuram Road was tagged as the ‘IT corridor’ (alongside others such as ‘Entertainment corridor’, ‘Automotive Corridor’). This Second Master Plan provides special provisions for IT-related commercial buildings located along the corridor (e.g. additional floor space index). This idea was initially presented in a preparatory report, commissioned to city planners around the year 2000 (author interview, Chennai, 2011).

This project of a road infrastructure meant to support the development of IT activities emerged at the dawn of the Indian IT boom, in parallel with other initiatives conducted by the authorities and by the private sector with a similar purpose. It coincides notably with the launch of TIDEL Park in 2000, an IT park developed by two parastatal agencies under the State [provincial] government, located at the northern extremity of the present ITEL. Similarly, a couple of IT companies started to locate new premises along the Old Mahabalipuram Road

at the turn of the 1990s-2000s, as the growth of their activity required new office space meeting the specific requirements of IT companies (large, open space floors, excellent connectivity), that was not available or at too expensive in central Chennai.

Project description

The project is a Special Purpose Vehicle created in April 2003, developed under a Public Private Partnership between the provincial Government of Tamil Nadu and the Tamil Nadu Road Development Corporation, a parastatal agency. Its aim was to turn the Old Mahabalipuram Road into a six-lane, toll expressway with high quality developments (six-lanes with a divider, additional service lanes, upgrading of cross roads, underground electricity cables, water and sewage ducts, pedestrian elevated bridges), with the ambition to make it a landmark of road development in India. It was placed under the direct supervision of the Secretary of Finance of the State government.

The land acquisition process was conducted under the new Tamil Nadu Highway Act 2001, which introduced different rules from those prevailing under the Land Acquisition Act of 1894, still in force in India. This law allows to fast-track the transfer of land for public undertaking within 30 days after notification, without waiting for compensation payment nor for court decision in case of litigation. The process was carried out in less than 2 years; the widening of the road required the acquisition of 48 acres of private land, affecting about 20 localities.

The initial cost of the project was estimated at 150 crore rupees (21.3 million euros). In March 2011 the overall cost had reached 400 crores (56.8 million euros) because of cost escalation and considerable delays in the completion of the work.

Stage of completion in 2012

The first three kilometers had been completed by 2006. The second and third sections of the road, extending up to the southern toll were completed by 2012. The condition of the roadsides is not of even quality: service lanes and sidewalks are incomplete, underground drainage are still under construction or already out of order. These margins of the road create space for informal activities, mostly roadside shops. The traffic is dense and diversified, with large daily traffic jams at the northern toll and at crossroads. The development of a phase 2 (40 more km to Mahabalipuram) has been announced, although work has not started yet.

From infrastructure project (expressway) to an economic growth corridor

A plurality of public initiatives aimed at attracting IT activities

The space bordering the ITEL – up to 500 meters on either side – has benefited from the early 2000s from special provisions under Chennai Metropolitan Development Authority planning regulation. IT-related commercial buildings locating along the corridor are exempted from certain building regulations, which provided an incentive for the construction of office buildings along the road.

Additionally, there were two national policies especially dedicated to the development of IT activities, which had a spatial impact in the area. First, the Software Technology Park of India (STPI) (a Central Government-sponsored national agency for IT) provided some tax alleviations and legal exemptions to companies occupying IT buildings enrolled under one of its schemes; this scheme was terminated in 2009. More recently, certain IT parks under specific conditions (size, contiguity) can benefit from the status of Special Economic Zone, which offers similar benefits as the STPI scheme.

These different schemes shape an ‘area of exception’ in addition to creating fierce competition between locations offering differentiated advantages. These schemes produced two different types and generations of office space built along the road during the last decade, which will be described in the next section.

Additionally, there is a concentration of publicly-developed locations meant to attract IT activities in the area: three IT parks, located at 10 kilometer intervals approximately from North to South, have been developed by different parastatal agencies, with varied results, to accommodate large scale IT ventures:

- TIDEL Park (opened in 2000), located at the northern extremity of the Expressway (Taramani), is a large building providing plug-and-play office space for lease, that has more or less reached saturation;
- ELCOT Park (opened in 2007) is located mid-way (Sholinganallur), and comprises of an unbuilt walled area of approximately 300 ha where companies can build their own campuses;
- SIPCOT Park (opened in 2005), located at the southern extremity of the Expressway (Siruseri), was created in 2000 on a similar model and is currently in full development, namely with the recent opening

of the new supersize facility (20,000+ employees) of India n°1 IT company.

The concentration of IT locations along the road

In addition to these publicly-developed parks, there are 30 to 50 IT locations along the road and link roads, which have been developed by private firms. Real estate companies in particular were enticed by the double boom of the IT sector and of real estate, with massive investment flows entering the sector until the financial crisis of 2008. It involves three different types and generations of realizations:

- facilities owned by IT companies themselves, including some vast campuses (e.g. Infosys, Cognizant, TCS);
- office buildings developed by real estate companies for lease, mostly under the STPI scheme;
- campuses (mostly under SEZ scheme) developed by real estate companies for lease.

It is to be noted that a couple of major IT companies occupy a dozen different locations in the three different types of facilities mentioned above, as they must accommodate considerable amounts of employees and different types of activities.

The second category – office buildings for lease – is the one most prone to high vacancy. The real estate boom that ended in 2008 had generated excess office space, usually registered with the STPI scheme, but not under SEZ (which requires 10 ha of land, a considerable surface of land), which made them less attractive for potential customers. As a consequence, a part of the office space along the road is vacant.

2. An area with a complex governance (actors and institutions)

A large range of public stakeholders

The development of the IT sector in India has received continuous support from the central (national) government for decades, in the form of various schemes (cf. supra). In Tamil Nadu it has been also the case, from the two ruling parties as well as from the bureaucracy. Tamil Nadu was the first State to develop a specific IT policy as early as 1997. Additionally to the TNRDC, the development of the IT corridor is fostered by initiatives from various other parastatal agencies (TIDCO, ELCOT, SIPCOT), each dependent

on distinct State government ministries. In addition to these parastatals, the Chennai Metropolitan Development Area is in charge of urban planning and planning enforcement in Chennai Metropolitan Area. But there is no nodal agency supervising the overall development of the area as such, since all parastatals have a limited agenda and none has preeminence above the others in this very centralized regional State. So no authority has had a mandate to ensure the integrated development of the area, which is one factor accounting for the uncoordinated development of the area.

Institutional fragmentation

This road initially extended *outside* the boundaries of Chennai Corporation after three kilometers, placing it within the Chennai Metropolitan Area. At the extreme southern end of the road project, the SIPCOT (Siruseri) Park is located even beyond Chennai Metropolitan Area limits, so the developments taking place around it fall under another authority and planning agency. This underscores the fact that the project development has had to deal with several different types of local bodies, with differentiated administrative capacity, which means an important number of additional stakeholders acting according to different regulatory regimes. This institutional complexity accounts partly for the lack of coherence in the development of the area that is obvious in the landscape. The recent (June 2011) extension of Corporation boundaries from Perungudi to Semmencheri, i.e. up to the two thirds of the corridor, reflects the political will to streamline the management of the area, by enforcing the oversight of the Corporation and the Chennai Metropolitan Development Area. The consequences at the local level are yet to be analyzed.

3. Outcomes and risks

Densification and competition for space

This megaproject is located on a relatively limited stretch of land, hence the development of IT activities on one hand, and commercial and residential developments resulting in suburban growth (extension of urbanization) on the other hand, are competing for limited space.

It is bordered on the eastern side by Buckingham Canal. It is bordered on the western side by the marshy area of Pallikarai marsh land: for instance, ELCOT park was clearly developed on a polder. The projects of protection and restoration of Pallikarai marshland may hinder

further development to the West. Several buildings already have to face serious problems of flooding. On this stretch of land thirty to forty rural and urban localities pre-existed, plus areas belonging to diverse government agencies (e.g. resettlement colonies of the Tamil Nadu Slum Clearance Board in Okkyiam Thoraipakkam and Semmencheri). Hence this is becoming a densely developed area where very different types of activities, populations income groups and buildings have to coexist, which translates into a highly diverse and piecemeal landscape and raises social concerns.

Diseconomies of agglomeration?

Cluster development aims at economies of agglomeration. Yet interviews conducted with respondents belonging to the IT sector point to diseconomies. First, transport problems: as mentioned above, the IT expressway suffers from frequent traffic jams at some points (northern toll, major crossroads). It has to host a dense and highly diversified traffic (e.g. lorries and trucks coming and going to the numerous construction sites, public buses, college and company buses, increasing number of personal vehicles). There is no connection to existing mass public transport networks like MRTS (city train) nor to the forthcoming subway. In addition, maintenance of the road is becoming a problem as the first part of the project was completed in 2006-2007. One

could observe that the rate of vacancy is correlated with distance to the city, although it is not directly determined by this factor. Here it is to be noted that new polarities of IT activity started to mushroom in other localities of the southern and western peripheries of Chennai, some of them offering SEZ status. Although they are still second best, companies have several locational options in Chennai, which may in the longer term undermine the predominance of the Old Mahabalipuram Road/ITEL area as the main area specialized in the IT sector.

Secondly, the growth of activity and population next to a fragile ecosystem (marshland), with limited ground table water resources, in a tsunami-prone area, raises environmental concerns [see WP4]. Problems of water provision as well as power provision increase substantially the running costs of IT companies too.

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Shastri Park Metro Station and Depot

The WP2 case study for the city of Delhi in India is concerned with the politics of the planning, building and financing the Mass Rapid Transit System (MRTS). The case study engages with key political issues at the metropolitan scale, issues whose salience is further enhanced by the status of Delhi as the country's political capital. In particular, the case study analyses planning issues in the immediate vicinity of the Yamuna River⁴⁰ (cf. map 1) and the choice of an economic zone, Shastri Park, in this case developed by the Government of Delhi.

Shastri Park is a project characterized as an “in-house project” by the authority in charge of its realisation, namely the Delhi Metro Rail Corporation (DMRC). This agency, created for the construction of the Metro in Delhi, has the decision-making power for this project. This project today includes, apart from infrastructure directly related to the metro (station, depot, buildings of maintenance), apartments and a training institute for DMRC personnel, three office complexes, which have a capacity to accommodate 10,000 people, rented out to private companies, and a theme park under development (cf. map 2).

Public transportation in Delhi – strategies and financial instruments

The Delhi Master Plan 2001 visualizes the metro as an alternative to the bus system, and recommends the construction of metro network. It is however noteworthy that major transport infrastructure development projects (replacement of buses, rapid buses with dedicated bus corridors, metro) have not resulted in any significant decrease in private transport (WEC, 2010). In Delhi, the metro project has come to centre stage as compared to the bus network.

In 1989, Delhi Government approached the Central Government to commission a *feasibility study* of the MRTS project by the consultant RITES⁴¹. The Union

Cabinet approved it in principle in 1994 and entrusted the task of carrying out the *Detailed Project Report* (DPR) to the Ministry of Urban Development under the Central Government with RITES once again as the project consultant.

The Delhi Metro Rail Corporation was set up in 1995 as a joint venture between the Government of Delhi and the Central Government. The direct participation of the Central Government was notably required in order to contract a loan from a foreign financial organization, the Japan Bank for International Cooperation (JBIC), for the first phase of construction of the metro. Two other levels of decision are constituted by a committee of secretaries chaired by the cabinet secretary (so at the national level), and an empowered group of ministers at the national level, which can take all the decisions related to the metro once approved by the Union Cabinet. This structure of governance at the level of the Central Government accelerates the decision-making process. The Ministry of Urban Development under the Central Government remains today the ultimate authority for the metro project and its property development activities.

Planning for the network has been divided into four phases: 1995-2006, 2006-2011, 2011-2016 and 2016-2021. The Commonwealth Games, held in October 2010, greatly contributed to speeding up the construction of the network and rerouting some of the lines to link sports competition venues or the Games Village. Land grants to DMRC for the operational structures of the metro (rail tracks, stations and depots) were made extremely easy, as compared to other large Indian cities like Mumbai, thanks to the decision-making structure put into place and the fact that land was not only available but also made available.

Land for the project relied mainly on grants of government lands belonging to different ministries and agencies, and the municipality of Delhi. Most of these lands have been granted to the DMRC at inter-governmental transfer rates notified by the Ministry of Urban Development for a 99-year period.

In 1996 the DMRC got the mandate from the Union Cabinet to finance 7% of the total cost of the first phase of the metro project through property development. However, contrary to the oft-quoted model of the Mass

40 The specific location of the case study on the banks of the Yamuna River and the environmental issue linked to this are analysed by the other team members (WP4) at the scale of the river.

41 Rail India Technical and Economic Services Limited.

Transit Railway Corporation of Hong Kong, the development is planned in two stages: first the entire metro infrastructure is planned, then tenders are floated for property development on land available, targeting the private sector.

The DMRC's property division (created in July 1999) deals with commercial space inside the stations as well as areas close to the stations (such as big brand retailers, hotel), and property development projects on land initially acquired for constructing depots and maintenance buildings. Most of these property development projects target the commercial sector (construction of shopping malls) as well as the residential sector (a project is underway for constructing condominiums).⁴²

The table below highlights the share of real estate income in the total revenue, and the difference between revenues generated by the upfront income from 2006 to 2009 (when the development rights were transferred to the developer for a long period), and revenues generated by the recurring income in 2010 (which is generated by licensing/leasing out properties to vendors on a yearly basis and is comparatively low).

The involvement of the private sector is based on a dual system of grants in a highly regulated land

42 For example, from 2003 to 2007 eleven projects directly involving the private sector were finalized by the DMRC on vacant land situated near stations and depots (cf. map 1). Out of these eleven projects, four were residential and seven were commercial projects. It is interesting to note that the number of developers who responded to tenders floated by the DMRC was far more for the residential projects.

market⁴³: between the Government agencies and DMRC while granting land, and then between the DMRC and the private sector. Decisions regarding the floating of tenders and the choice of developer are taken solely by the DMRC. The first project finalized by the DMRC in WP2 case study Shastri Park consisted only of operational structures related to the metro and a site reserved for a residential project on a plot of land measuring more than 16 ha. In 2001, DMRC floated a call for tenders for this residential project for which no developer came forward. Financial difficulties faced by local developers in 2001, linked to a decline in property values, is one of the reasons cited for this lack of interest.⁴⁴

In 2003, the Delhi government approached the DMRC to build a business park specializing in advanced information technology on the land originally earmarked for this residential project. The construction of the IT Park was wholly funded by the DMRC, which received an interest-free loan from the Government of Delhi. There are on-going negotiations to extend the IT park from 6ha to 12ha. This project illustrates the trend observed in many of India's metro cities of governments proactively promoting zones specialised in advanced technologies, especially since the passage of the national Special Economic Zone Act in 2005 (India Country Report 2010:10).

43 The construction of housing is still strictly controlled by the DDA, the Delhi Development Authority: unlike in other States, the National Capital Territory of Delhi has no control over land acquisition and development, both managed by the Delhi Development Authority (DDA), a parastatal set up in 1957 in charge of the Master Plan and which is accountable only to the Central Ministry of Urban Development. The private sector is not yet allowed to assemble land in Delhi.

44 There was a recession in property values between 1996 and 2003 in Delhi.

Table 1: Different sources of revenue of DMRC and their respective share in the total revenue.

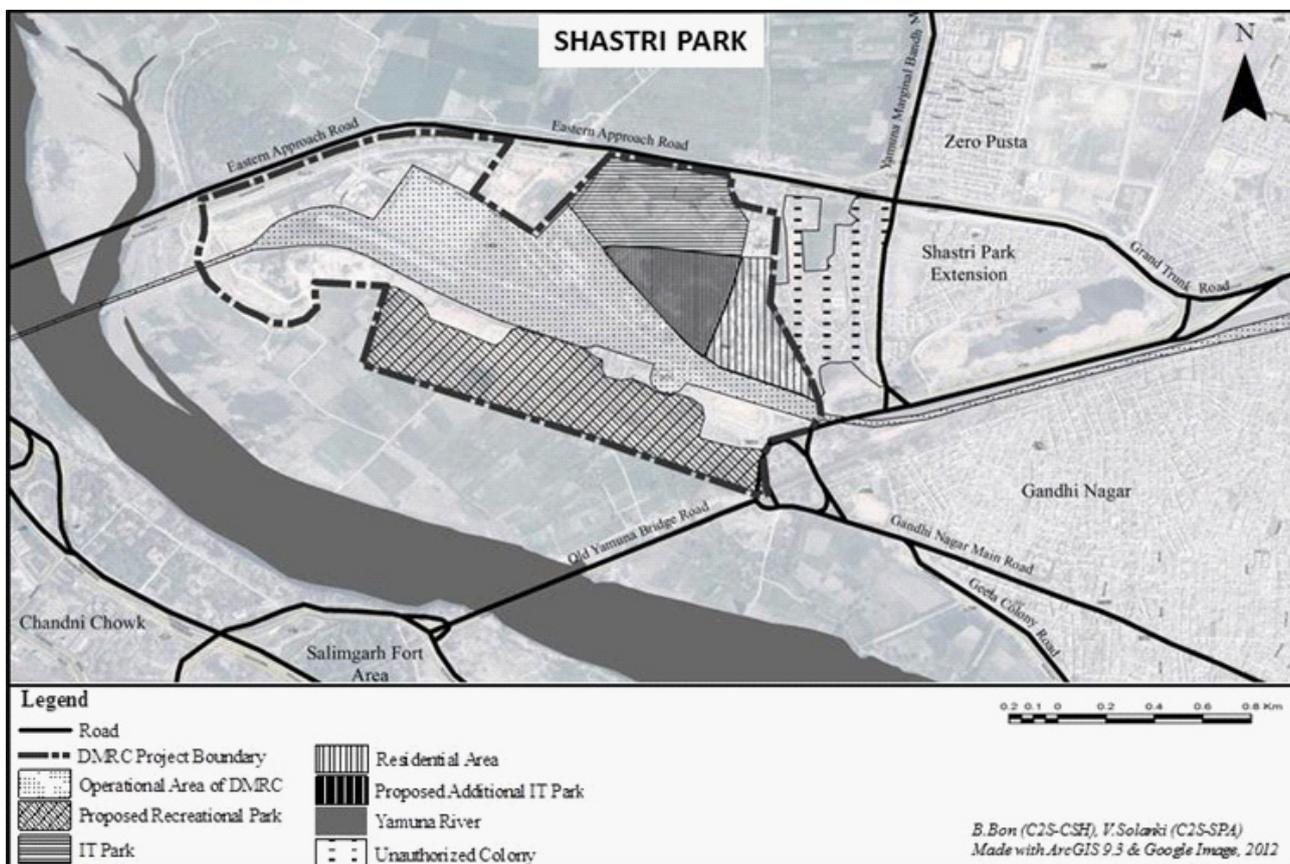
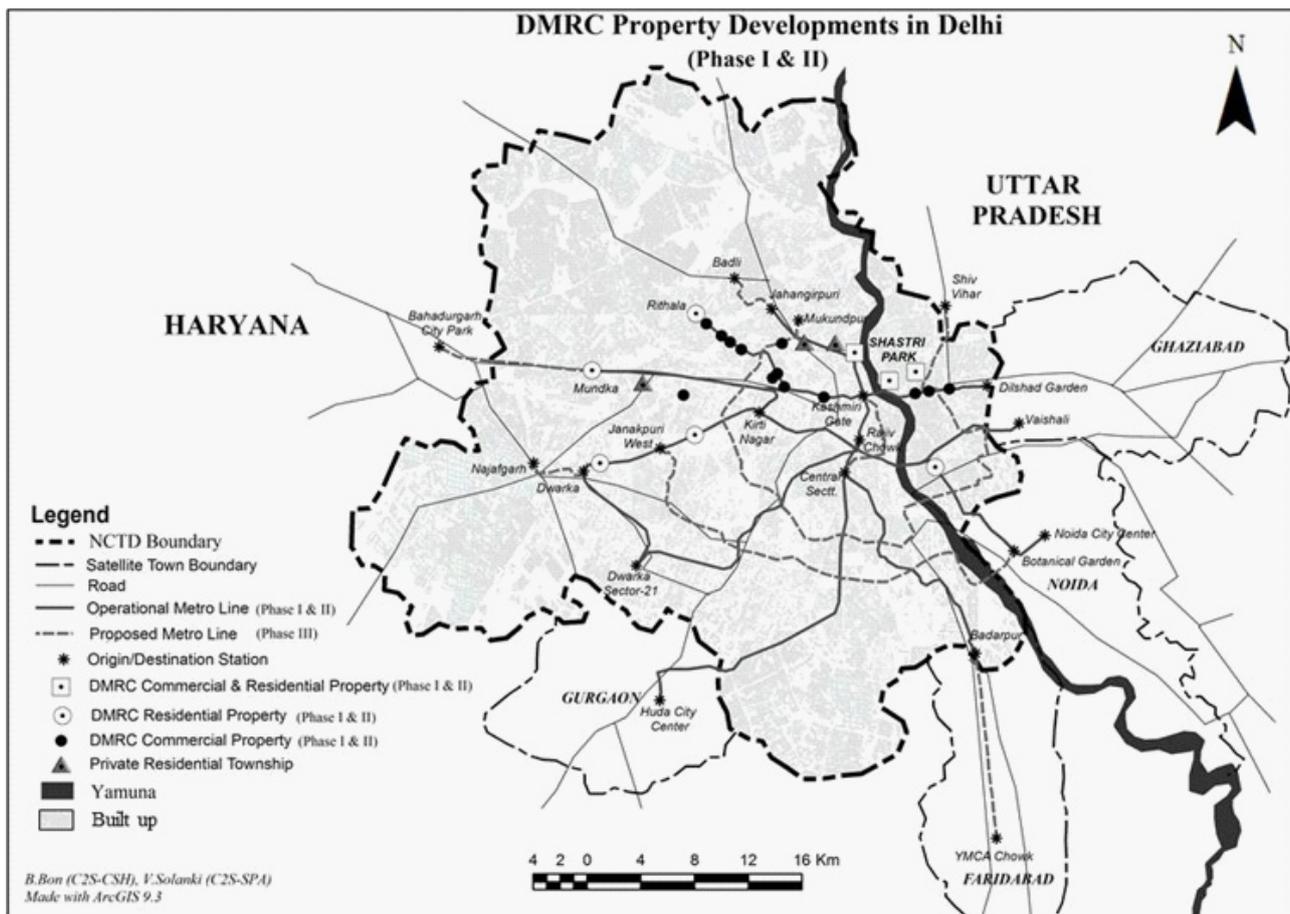
Income Source	2006-07	% Total Income	2007-08	% Total Income	2008-09	% Total Income	2009-10	% Total Income
Traffic Operations	22266	41%	31702	63%	39286	54%	52720	81%
Consultancy			1344	3%	2813	4%	3219	5%
Real Estate	25180	46%	11982	24%	24499	34%	2927	4%
Others			5406	11%	5778	8%	6560	10%
Total	54278		50434	100%	72376	100%	65426	100%

Figures in Lakhs (Rs.)

Source: Tiwari G., Goel R. (2011), Financial Performance of Metro System (DMRC) and Bus System (DTC): Policy Implications, IIT Delhi, Annexure 6, p.1



Map 1:



Governance structure

The main stakeholders in charge of transport at the metropolitan level are the DTC (Delhi Transport Corporation under the Delhi Government), the DIMTS (Delhi Integrated Multi-Modal Transit Systems, a joint-venture of the Delhi Government and the company IFDC specialized in financing of infrastructure projects), and the DMRC. The DIMTS was established in 2006 to implement in particular the project of BRTS (Bus Rapid Transit System) in Delhi. Before the adoption of a draft national urban transport policy in 2006⁴⁵, the Central Government did not have a transport policy, which remained the responsibility of State governments (Tiwari, 2010).

The DMRC, created specifically for the construction of the metro, appears to function on the basis of an *ad hoc* structure of governance, with decision-making taking place mainly at the level of the Central Government. The Ministry of Urban Development under the Central Government intervenes directly at the local level in the planning of the DMRC property developments. DMRC holds all the decision-making powers whereas land rights remain with public authorities. The implementation of the metro in Delhi and the process of generating revenue from land development is being promoted as a model for other Indian cities, with DMRC acting as the main consulting agency and conducting feasibility studies (Ramachandraiah, 2012).

The mandate to carry out property development projects was not much criticized or discussed in the first years of construction of the metro, the period during which the project studied here, Shastri Park, was decided. Urban local authorities like the Delhi Development Authority, and Municipal authorities agreed in the early years to facilitate the planning of these projects. One of the possible explanations for such positive conditions were the financial difficulties faced by DMRC during these years.

DMRC has not produced any document spelling out its long-term vision nor the urban aspects of its projects i.e., the integration of these property developments within their urban environment. The scale of reference seems to be the performance of the network at the level of the metropolitan region. This illustrates a techno-scientific way of planning Indian cities.

In contrast to the bus network, which is run by the Delhi

government, the DMRC is exempt from paying most of the taxes levied by the Central Government and the Government of Delhi. It is noteworthy that the issue of tax revenues for urban local authorities was a source of conflict between the Municipal Corporation of Delhi (MCD) and the DMRC, leading to litigation that started in 2008. The municipality refused to sanction the plans⁴⁶ for some development of commercial projects on land granted to the DMRC, because the DMRC was exempt from paying property taxes on projects within its jurisdiction that were *not* directly related to the metro.

The change in land use or zoning is certainly the most widely used instrument by different stakeholders to assert their authority in the planning process of the Shastri Park project on the banks of the Yamuna river. It has been particularly a source of conflict between DDA and the DMRC. It must be noted that twice construction started before DDA had changed the land use (or zoning) regulations: DMRC preferred to pay the financial penalties rather than yield to the long deadlines imposed by DDA. NGOs dealing with environmental issues have not been effective in influencing these decisions and tend to act only through legal channels.

Local impacts and indirect effects at different scales

Regarding the impacts on the planning at the scale of the metropolitan region, metro corridors define the influence zone around the metro lines, where the private sector and government agencies derive benefit from a higher Floor Area Ratio (FAR) and simplified regulatory framework for land use change (zoning). These planning regulations form part of a set of planning decisions that go beyond the Delhi metropolitan level, and are applicable to other large Indian cities where major transport infrastructure projects are being planned. Transit Oriented Development (TOD) is a policy under which large transport infrastructure forms the backbone of redevelopment projects or new property development projects with specific planning regulations. The DDA institutionalised this process in 2007 in the Master Plan 2021, although the chapter detailing the policy has not yet been added to the document. Among the three proposed TOD pilot projects, one targets the development of an industrial IT corridor along a metro line in North West

45 This policy was introduced at the same time than the JNNURM, a Central Government scheme launched in 2005 (India Country Report 2010 : 7). JNNURM funds are mostly used to improve basic urban services and infrastructure in the largest cities.

46 The DMRC has to get statutory clearances from different stakeholders operating at the scale of the National Capital Territory of Delhi: the architectural and conceptual plans from the DUAC (Delhi Urban Arts Commission), the land use change (zoning) from DDA, the building plans from the municipal authorities, etc.

Delhi (close to Mundka cf. map 1) with the DMRC as one of the main actors.

The study also involves analysing political processes at the local scale. It is necessary to situate the Shastri Park project within its specific socio-economic environment, and with regard to the local political culture and practices that prevail in this predominantly low-income area. Shastri Park is a large-scale project located just adjacent to one of the most densely populated areas of Delhi, where a majority of the residents belong to the Muslim minority. Economic activity in the areas adjoining the project is largely informal and mainly relates to textiles. The second economic activity is the meat trade. The knowledge exchanged and mobilized locally about the Shastri Park project is analysed in the light of the political arena at the local level. The spaces of uncertainty of the project and the wait-and-watch situation (for ex. regarding the regularization of the adjacent housing colony) are today being felt at the micro level, stoking

tensions in residential zones with a precarious status. These micro politics revolve around the link between the politico-administrative structure, the city-dwellers organizations, and the decision-makers who intervene in a more or less unofficial manner to resolve conflicts.

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VI Appendix 6: Kalyan

Background of 150 MLD Water Supply Project in Kalyan-Dombivli Municipal Corporation

Neeraj Mishra

1. A. Project context dimensions

The large-scale water supply project studied in Kalyan was funded under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). This ‘mission’, the single largest initiative for planned development of cities in India was launched in 2005 as a response to growing urbanization in Indian cities on one hand, and the lack of basic infrastructural facilities on the other.⁴⁷

At the *provincial level*, JNNURM created opportunities for State governments to access funds, subject to certain conditions, for the infrastructural development of their cities. Maharashtra is in some respects a progressive State and has been in at the forefront in implementation of constitutional directives, for e.g. the 74th Constitutional Amendment Act and computerization of public services delivery. As JNNURM makes both of these mandatory conditions for grant of loan, Maharashtra was able to secure many such projects. The State government, under the leadership of its planning and development authority, MMRDA, had 85 approved projects, with the highest number (25) approved in the area of water supply. One of these projects is the 150 MLD water supply scheme in Kalyan-Dombivli Municipality (KDMC).

At the city level: Before 1995, water needs of KDMC were met by a State-level agency, the Maharashtra Industrial Development Corporation (MIDC).⁴⁸ The policy decision of

setting up “independent filtered /potable water supply system of adequate capacity” as essential infrastructure for industrial development was an important step taken by MIDC right in the beginning. The growth of Kalyan complex is the result of this key policy decision taken by MIDC. This also meant that Kalyan-Dombivli was dependent on this corporation for meeting its water needs and did not develop any infrastructure to procure its own drinking water.

In 1993, KDMC proposed to build a 90 MLD water supply system on the Ulhas river with a total budget of 690 million rupees (9.9 million euros). This project was completed in 1995.⁴⁹ KDMC still bought 95 MLD from MIDC to meet the demands of the city. In July 1999, a new raw water pumping station at Mohane was sanctioned with a budget of Rs. 18.5 million rupees (266 000 euros). This project would augment the existing 90 MLD station and raise its capacity to 144 MLD. This project was commissioned in February 2001, designed to source 216 MLD of raw water at its ultimate capacity. The city has many sources of surface water (7 lakes, two perennial rivers), which are however heavily polluted and unfit for consumption. The water department has made some efforts to clean these lakes on and off but has met with little success. (The example of *Kala Talao*/black lake; Kalu river, other main lakes in the city).

2. B. Mega project commitments in the city budget since 2000

The increase in raw water collection required an augmentation of the capacity of the water treatment plant at Barave also. In January 2001, KDMC proposed the construction of a 54 MLD water treatment plant at Barave, which would increase the pure water production capacity to 144 MLD. This project was completed in May 2002.

KDMC also draws 2 MLD of water from the Kalu river, near Titwala. The corporation has plans to increase this

47 In 2011, a high power committee reviewed the program and suggested its continuation with recommendations for a “new improved JNNURM”.

48 After the formation of Maharashtra State in 1960, the State government constituted a “Board of Industrial Development” (BID) under the Chairmanship of Shri. S. G. Barve. As per the Borkar Committee recommendations, development of the Ulhas Valley Water Supply was entrusted to the BID. The BID framed legislation the Maharashtra Industrial Act, which gave birth to the MIDC as a separate corporation on August 1, 1962.

49 The activities to be undertaken in this project included the augmentation of old raw water pumping station at Mohane, construction of a water treatment plant at Barave, laying down of raw water pumping main and pure water transmission main pipelines, laying of distribution pipelines in the city, and to build new elevated service reservoirs at different locations in the city.

capacity to 7.5 MLD for its Manda-Titwala area along with the construction of a 500,000 liters capacity master balancing reservoir for this source. The water department is also currently supervising the construction of new elevated service reservoirs at Barave and Govindwadi in Kalyan (W), laying new distribution pipelines in the new zone of Kalyan (W), and construction of 15 ML capacity reservoir at Netivli for emergency water storage.

3. Project Timeline

From the broadest perspective, the water supply project originated with JNNURM in 2005-06. At the conceptual level, both the State and city government were aware of the water shortages in KDMC and the cost of purchasing water from MIDC. Both realized that having its own water supply system would be highly economical for the water department, which now recovered only two-thirds of what it spent. These were some of the pending water problems of Kalyan-Dombivli, which lay dormant in the absence of sufficient grants or loans. The immediate need was to develop a 150 MLD water supply system on the bank of river Ulhas, which began its first construction activities in July 2009, after the approval of the project by the central Ministry of Urban Development (MoUD) in February 2008. At the policy level too, the need for such a project was felt necessary by the city water department long before JNNURM was announced. The State government also felt the extra burden that fell on MIDC to cater to the increasing water demands of KDMC. These factors provided strength to the idea of proposing a 150 MLD water supply project exclusively for the Kalyan-Dombivli city.

Project formal planning starting dates and the role of private firms: The formal planning for the project began with the preparation of a City Development Plan (CDP) by Subhash Patil Associates, Thane in 2006, which provided an overview of the infrastructural capital in the city. This document outlined the existing gaps in water supply system and suggested ways to address these. The DPR (Detailed Project Report) of the 150 MLD project was drafted by Consulting Engineering Services (India) Private Limited (CES), Mumbai, and submitted to KDMC first in December 2007 and then revised as per the comments made by MoUD and MMRDA, and resubmitted in February 2008. This was further revised by CES and a final report was submitted to KDMC in January 2009. CES carried out the necessary topographic survey for preparation of plan, preparation of base map, finalization of design parameters, estimates, O&M costs, tariff structure, and implementation schedule. It would also advise in providing flow meters at strategic locations (KDMC, 2006). CES also analyzed the raw

water sample at the source near Mohili village and found it suitable for treatment and subsequent supply as per the recommendations of the 'Manual on Water Supply and Treatment' of Central Public Health and Environmental Engineering Organization (CPHEEO) under the Ministry of Urban Development, Government of India. Construction work began at the project sites in partnership with Gharpure Engineering and Constructions Pvt. Ltd., Pune, in 2009

Project approval and starting dates: The project was first submitted to MMRDA for its approval and then to MoUD. It was approved by the MoUD and MMRDA in February 2009. The water department of KDMC began work in July 2009 in Mohili village in partnership with Gharpure Engg. This augmentation of 150 MLD is designed to fulfill the initial stage demand (cf below). The project was to be functional from January 2012 but is not yet completed. It is expected to begin working from January 2013.

Progress/ blockage/ conflicts/ events and dates: The remarks raised by MMRDA on the first version of the DPR submitted by KDMC in 2008 notes that 'the schedule of implementation should include land acquisition and clearance requirement' if applicable. In the next version of the DPR, it was claimed by KDMC that it had complied and there is no acquisition of land in the project. This information was not totally incorrect as most of the land at the chosen site was owned by the forest department. There was also a small one acre patch of land (32 *guntha*) that belonged to a local farming family living in the Mohili village, located close to the project site. The owner, Sandeep Patil met with the Commissioner and agreed that water projects in such dire circumstances cannot be stopped but the land that he owned in the middle of the project site was 'reserved' and hence cannot be sold. Also, the land was in his grandfather's name, which meant that it had owners spread across two generations. 25-30 people would have to come together to sell this land, says Patil. The project was dependent on this piece of land to construct its source tank, which meant that KDMC could not proceed with the new project unless this was resolved. Senior officials from the water department of the corporation visited Patil's house in Mohili to discuss the problem and came to an agreement that allowed KDMC to begin work on his land and in return, the corporation will supply 1.5 hours of water to the Mohili village everyday. Also, Patil got the contract for supplying materials and labor to the project construction site.

Space for the water treatment plant in Netivli was in this sense much easier to acquire as it belonged to the municipality, but occupied by slum like habitation. The deputy engineer at the site explained that this was a hilly area and the workers found stones after digging only a couple of meters. This required a further removal of the



slum inhabitants from the vicinity as the rocks would be blasted for further digging. The water department obtained permission from the police department and municipal commissioner to cut the bedrocks by using dynamite sticks. People removed from the project site gradually reoccupied the Netivli foothills and other spaces on the hill outside the construction area.

Links to surrounding areas/other infrastructure assets/clusters: There is no direct link to the surrounding areas as the water to be treated here would be directly supplied to main city via Netivli storage tanks. The site village of Mohili has however negotiated with the municipal corporation to receive a half-inch drinking water pipe from the project site to the village.

Public engagement process dates: The public engagement process was conducted in making of the 'city development plan' that records meetings with eminent citizens of the city. However, it was noted in the personal interviews that such meetings were staged and took place 'only on papers' without any genuine concern to include people's knowledge in improving the water policy. 'Participation' of the people in planning process was only an exercise in ticking the right boxes provided in the JnNURM format.

4. Spending:

The total project cost was estimated by CSE, Mumbai to be Rs. 2650 million (38 million euros), to be distributed as follows among three levels of government: national (GoI), State (GoM) and local (KDMC). KDMC is expected to pay 50% of the project cost, to be funded through soft loans from the State government (GoM). GoM pays 15% of the total cost to KDMC. GoI pays 35% of the total cost to KDMC. As for the private site developers, they are paid by KDMC as per the tender agreement.

5. Physical location/maps/scale:

Location in city (core/edge): The project has two main sites. The raw water collection and 100 MLD purification setup at Mohili village, located on the edge of Kalyan city towards Titwala and the storage system and 50 MLD purification plant located on Netivli Hills between Kalyan and Dombivli.

Pre-project land use: Netivli site acted as the dumping ground and had grown into a small slum populated by the

garbage collectors when the project began its work. The site in Mohili village was used for agricultural purposes though the land was not considered to be exceptionally fertile by the local farmers.

Extent of area (relative to other projects): Relative to other water infrastructure in KDMC, which includes the treatment plant of 140 MLD located at Barave, Kalyan and the 7.5 MLD plant located at Titwala, this project would be the largest water infrastructure in Kalyan-Dombivli with 150 MLD capacity.

Other proximate/site issues (relocations, rivers, roads): Partial relocations were noticed at the Netivli hills site. It was occupied by slums, which moved only a short distance away when the work began. The slums were shifted further away when the construction team met hard rocks just below the ground surface, which needed to be blasted with dynamite for the work to proceed. The slum dwellers reoccupied the hillock around the construction site.

6. Institutions

Involved directly in planning and delivery: As mentioned, to prepare the CDP, KDMC a private firm as its consultant and coordinator. Officially, as per the JNNURM guidelines, people's participation was considered important for the preparation of the CDP, which was supposed to be achieved by meeting people belonging to different socio-political groups (KDMC-CDP, 2006: 9). The consultants also conducted interviews with the ward councillors, local MLAs and MPs to include their objectives and developmental visions. Finally, various activities were proposed and relevant projects were discussed before the CDP was presented to KDMC. The general body of the corporation approved this CDP in December 2006 (vide Resolution No. 81 of 15/12/2006). The DPR of 150 MLD project was drafted by CES, Mumbai following a similar process.

Institutions with regulatory process influence: The private consultants hired by KDMC to prepare the CDP and DPR of the project were answerable to the water department of the corporation. The reports prepared by consultants/DPR of 150 MLD project were crosschecked by the executive engineer of water department and then submitted to the State level nodal agency, MMRDA. MMRDA made its remarks on the submitted DPR of 150 MLD project and returned it to CES, Mumbai (through KDMC) for further corrections and formatting as per the JnNURM directions. The DPR was then resubmitted to MMRDA with an attached sheet of 'compliance of remarks raised by MMRDA on DPR for 150 MLD system, KDMC'. It was then sent to the MoUD for final approval.

Institutions with indirect relevance: The guidelines for making the CDP was formulated by the MoUD, Planning Commission of India, NIUA, NIPFP in consultation with the eminent urban development scholars based on the guidelines provided by the WB, ADB, DFID, USAID documents. MIDC as a State corporation selling water to KDMC at high rates; ‘lifestyle cities’ and their future water demands- private land developers.

Special project entities created: The project once completed (with the partnership with private companies) would be operated and maintained by the water supply department of KDMC. In this sense, the project has created many short-term coalitions under the PPP model but no institutional reform has been initiated as an outcome of this project. An informal citizens’ committee (formed by the eminent citizens like lawyers, famous medical practitioners, teachers/professors, traders etc. of the area) also came into being for a short period of two months during the preparation of CDP and disintegrated soon after.

Allocation of roles across institutions (drivers): The governmental agencies remained the leaders of this project. At the city level, KDMC drove the project by supervising the assignments and DPR prepared by CES, Mumbai. At the State level, MMRDA led the project acting as the State level nodal agency and at the national level, MoUD was responsible for leading the program. It evaluated the DPR presented to it and advised on the required changes based on the JNNURM guidelines.

Governance dynamics by each institutional category (institutional governance typology): Forms of accountability: While there exists a defined hierarchical structure between KDMC-MMRDA-and MoUD, the micro-level dynamics of accountability between the city corporation and private companies is not well defined. The initial agreements outline the completion dates of different phases of the project, however the issues in case of delay or non-delivery of project goals remain obscure. The relationship between private companies and KDMC is one of equality as partners in a common project, however the control of funds and its release gives KDMC an upper hand. The private companies are accountable to KDMC, which in turn is accountable to the funding agencies, GoM and GoI.

Institutional arrangements for operation and maintenance after project completion: The project once completed (with the partnership with private companies) would be operated and maintained by the water supply department of KDMC. Article 63 (20) of the BMPC Act 1949, under the section called ‘matters to be provided for by the corporation’ notes that the corporation is responsible for “the management and maintenance of all municipal water

works and the construction or acquisition of new works necessary for a sufficient supply of water for public and private purposes”. The water supply department of KDMC is led by a hydraulic engineer, who works with the help of 7 deputy, and 7 junior engineers, each responsible for one administrative zone. This department is responsible for managing the raw water pumping station at Mohane and a water treatment plant at Barave along with the 400 km wide network of transmission pipelines. The treated water is distributed into the city with the help of pumping stations and service reservoirs located at 7 different points (Atali village, Galegaon village, Katemanivli, Netivli, elevated service reservoir near Ramchandra theatre, near Nandivli road and Ayre road). The water department also carries out field test of water samples to maintain the quality of water in different zones and from different sources.

7. Concept/framing:

General policy framing by different institutions (national, State, private, other interests, civil society): The national discourse on city development focuses on the need for the provision of basic services to urban areas, which would help in harnessing the actual economic potential of the city by providing better facilities to its citizens and attracting capital investments. JNNURM presents this focus with clarity and has allocated huge funds to meet this goal. State government realizes the importance of KDMC as an important industrial and residential suburb of Mumbai, which lacks in infrastructural capital for basic services. So far, the State government has managed the water demand in this area by allocating the gap from MIDC, a parastatal agency. KDMC complains that MIDC waters cost twice the amount that it spends for the same quantity in its own water treatment plants. At present KDMC supplies a total of 238 MLD of water from all the available sources, out of which around 140 MLD of water is processed by KDMC. The rest of purified water is purchased from MIDC at the rate of Rs. 7/ cubic meter. This rate is relatively high compared to the cost of pure water incurred by KDMC at its own plant i.e. Rs. 3.60/ cubic meter. Large land developers who propose to build ‘world class’ residential areas in this city with considerable demands for water also put pressure on the State government.

KDMC proposes to develop its water supply system in three phases:

- **Initial Phase (2011).** In the first phase, a source work is proposed on the Ulhas river at Mohili in order to draw 150 MLD water, which will cover the present deficit of 122 MLD. A new water treatment plant at Netivli with the same capacity would also be constructed.

- **Intermediate Phase (2026).** In this phase, KDMC proposes to increase the capacity of Mohili source by another 150 MLD and construct another water treatment plant at a new location or in Netivli depending upon the availability of space. Once this is complete, KDMC would be in a position to draw the sanctioned (by the government of Maharashtra) amount of water from Ulhas river. At the end of this stage in 2026, KDMC predicts to be a water surplus city with 451 MLD against the predicted requirement of 418 MLD.
- **Ultimate Phase (2041).** In this phase, KDMC proposes to exploit the other source in Kalu river to secure another 100 MLD, which would then be connected to the present system of transmission and distribution.

Processes related to concept framing (consultation/partnerships/coalitions): Working under the PPP model, KDMC hired private consultants to prepare the DPR of the 150 MLD project and reviewed the work done by the private agency with the support of MMRDA and MoUD. The project has created many short-term coalitions under the PPP model but no institutional reform has been initiated as an outcome of this project. The informal citizens' committee also came into being for a short period of two months during the preparation of CDP and disintegrated soon after.

Source of expertise used: The expertise used in the project comes mainly from private companies and urban development department of MMRDA. Also, the National Institute of Urban Affairs, New Delhi participated in reviewing the CDP and suggesting required changes in the initial stages of the project.

8. Process aspects/ character including knowledge applied/generated/shared/contested:

JNNURM makes it compulsory for all selected cities to formulate a comprehensive 'city development plan' and a broader 'vision document' outlining the future developmental plans of the municipality. Based on these two plans, JNNURM demands a further 'detailed project report' of the individual developmental projects to be undertaken within this scheme. This has literally forced the municipalities like KDMC to seek out such consultants

who could help them draft these plans and reports. That being said, both the CDP and the DPR for the water project relied on the existing knowledge available in KDMC (water department). The water requirement was a long felt need in KDMC that was communicated to the consultants preparing the plans. This has created a new configuration of knowledge producers on/ in the cities with private consultants acquiring a renewed status. KDMC hired three consultants to draft its three different plans. The technical knowledge around this water supply project was built by the consultant with inputs from KDMC. This knowledge was reviewed and co-produced by MMRDA and MoUD. The broader 'vision 2020' was entrusted to the KVA Consultants and Engineers Pvt. Ltd. (Kandivli East).

The corporation agreed to share the relevant published material with the consultant and provided information about the functions and duties of each department in KDMC. The consultants organized meetings with citizens from different walks of life to understand other developmental discourses in the city. If we consider the citizens invited to share their ideas about developing Kalyan-Dombivli as the representatives of non-dominant knowledge forms, it is evident that the dominant paradigm has prevailed without any visible inputs from the citizens' committee. The CDP/DPR as a technical document does not reflect any inclusion of people's knowledge in planning or project implementation. An accountability system is needed in this part of the process, the lack of which makes it difficult to assess if the citizens were able to voice their opinions without any pressure or compulsion. MoUD must also ask for the minutes of these meetings and evaluate the project proposal in that light also before the final sanction.

9. Other relevant information: Water Status of KDMC

As per the city development plan of KDMC, the total population that the water department caters to is approximately 1,467,000, with a compound growth rate of 3.82 percent per annum. Owing to the simultaneous growth and expansion of Mumbai, Thane and Navi Mumbai in the neighborhood, the population of Kalyan-Dombivli is on a steady rise. At an average growth rate of 3 percent, the city development plan has calculated the water needs of KDMC to be as follows:

Water Needs of KDMC:

Year	Population (in Million)	Water Demand (in MLD)
2010	1.47	255
2015	1.77	304
2020	2.05	353
2025	2.38	413

Source: (CDP, KDMC, 2008).

Water Demand:

Year	Population	Net Water Demand in MLD (@150 lpcd)	Gross water demand in MLD (with 15% losses)
2001	10, 47, 297	157. 095	184. 8
2011	15, 23, 632	228. 545	268. 9
2026	24, 26, 478	363. 972	428. 2
2041	31, 39, 889	470. 983	554. 1

Source: (CDP,KDMC, 2008).

The current status of water supply in KDMC is as follows:

Own source at Mohane on Ulhas River	138 MLD (Designed for 144 MLD)
Own source at Titwala on Kalu River	2 MLD (Designed for 7.5 MLD)
Purchase of treated water from MIDC and others	98 MLD
TOTAL	238 MLD

Source: (CDP,KDMC, 2008).

VII Appendix 7: Arequipa

Water and Sanitation System for Metropolitan Arequipa

Guillermo Takano

The WP2 case study for the city of Arequipa in Peru focuses on a large scale project that aims to enhance the water and sanitation system of the whole metropolitan area. It is composed by one potable water treatment plant called “La Tomilla 2” (to be finished during the first half of 2012) and two wastewater treatment plants: a small one called “La Escalerilla” (to be finished in 2013) and a main treatment plant whose final delivery is still uncertain after a complex succession of rejected and proposed projects. With a total investment of approximately 250 million Euros, the main objective of the project is to cover potable water existing deficits (currently 250.000 households) and decontaminate the “Chili” River that goes through the city.

1. The project in relation with the ‘Extractivist’ development model

As Stated by WP2 conceptual guidelines (Kennedy et al. 2011) the report confronts the development of the project with metropolitan and national scale economic development visions understanding cities as “engines of economic growth”. Following this line the report deeply analyzes the political and economic protagonism acquired by mining corporations, taking Metropolitan Arequipa as its unit of analysis. The project has been studied in relation to the role of the third biggest mining corporation in Peru “Sociedad Minera Cerro Verde” (henceforth SMCV). SMCV holds a copper and molybdenum mine situated 12 kilometers southwest from Metropolitan Arequipa and it is currently owned by the multinationals Freeport-McMoRan and Sumitomo, and the Buenaventura Group from Peru.

SMCV had increased its production by more than 300% between its privatization in 1993 and 2005, accounting for 44% of the total tax income of Arequipa (both local and regional levels) for the period between 2005 and 2009, becoming a central component of the economy of Arequipa. In fact, these numbers have a correlation with the rising political power of the mining sector at the national level and SMCV in Arequipa, since the activities they hold are

considered as the most strategic for acquiring fiscal stability and sustaining economic growth.

2. Water and Sanitation in Metropolitan Arequipa

In 2005, 19.5% of the population from Metropolitan Arequipa had no access to the water network and 33.1% were not connected to the sewerage network. In 2011 there was a potable water deficit of almost 333 liters per second. SEDAPAR, the metropolitan water company, currently gets 1.3 m³ per second from the Chili river system which constitutes 81% of its total demand. That whole volume of water is treated by a single potable water treatment plant called “La Tomilla (1)” in the Cayma district at the northern part of the metropolitan area.

In relation to the existing wastewater infrastructure SEDAPAR treats only 11.39% of wastewaters through the “Chilpina” treatment plant built in 1969. The untreated 89% of wastewaters (1.2 m³ per second) is dumped back to the Chili river by approximately 50 releasing points. 97% of that volume comes from the SEDAPAR sewerage network. In seven identified spots along the river, the level of fecal coliforms exceeds the WHO and Water Law standards regarding irrigation for agriculture and water consumption for animals. After these dumping spots more than 26.000 ha of agricultural land are irrigated at the medium basin, which represents the food source of the whole metropolitan area.

3. Main actors involved

After presenting SMCV as a main actor in the process, a number of government and civil society actors had an important role on the decision making and development process such as:

- The **Fighting Committee for the Interests of Arequipa**. An *ad-hoc* defense frontline that included a number of relevant social organizations such as the **Wide Civic Frontline of Arequipa** which is formed by labor unions, neighborhood associations, student unions and some transport unions; the **Departmental Workers Federation of Arequipa** (FDTA) which is the

central labor union’s coalition of Arequipa formed in 1951. The **Association of Popular Urbanizations of Arequipa** (AUPA) was created in 1955 as a centralized organization of informal neighborhoods (“barriadas”) for canalizing demands for land plots, housing, public services and social program implementation; and the **Defense Frontline of the North Cone** (FREDICON).

- **SEDAPAR**, the metropolitan water company.
- The **Arequipa Metropolitan Government**
- **29 district governments** within the metropolitan area.

- **National and regional water authorities.**
- **The National government** represented by the prime minister.
- **Private consultancy firms** and **Professional Bodies.**

The different roles and duties acquired by each actor along the whole process are presented in table 1. The succession of events clearly show the conflictive nature of the relationship of SMCV with the rest of actors and how large scale projects work as effective instruments to canalize the conflictive situation of the “extractivist” model in Arequipa.

4. Project Narratives

Table 1. Summarized narrative of the main events occurred

Early 1999	SEDAPAR requests the German consultancy association Gitec-Fichtner to elaborate a feasibility study for the "Expansion and Improvement of the System for Emission and Treatment of Waste Waters from Metropolitan Arequipa"
2003	The population starts realizing the systematic dismissal of their requests to SMCV
2004	An 800 million USD investment of SMCV is approved for expanding its operations with no duty to pay income taxes (247 million USD) in accordance to the Profit reinvestments in exchange of income tax exonerations mechanism for promotion of private investments. 8 shantytowns from the Uchumayo district adjacent to the mining camp start a protest and a negotiation process.
Late 2004	Demonstrations starts in Uchumayo in order to enforce SMCV’s compromise
Mar/2005	Uchumayo protests start to expand to other areas of the metropolitan area until it acquired a provincial level by early 2006.
April/2006	22 million USD from mining taxes are not transferred to sub-national governments in Arequipa , since the SMCV investment is exonerated of paying income taxes.
May/2006	The mayor of Arequipa convoke organizations and district municipalities to conform a Fighting Committee for recovering the non-transferred funds
May/2006	A big demonstration to SMCV organized by the Fighting Committee (15000 people) is repressed
June/2006	Representatives from the Fighting Committee go to Lima in order to claim the government to restitute income taxes to SMCV and mining canon transfers to Arequipa local governments
23/06/2006	A dialogue table is installed by the Prime Minister Jorge del Castillo
27/06/2006	Regional protest convoked against SMCV
30/07/2006	Social Organizations agree that SMCV needs to finance the construction of the potable and waste water systems for Metropolitan Arequipa
02/08/2006	A Compromise Act is signed between SMCV and the Fighting Committee . SMCV would finance studies for the whole water and waste water system and finance the development of the potable water plant while 18 local governments would finance the development of the waste water plant
01/09/2006	SMCV states that there should be waited until the coming elections in order to include newly elected mayors in the process. Mayors accept and the process was delayed until December 2006
19/11/2006	Regional and municipal elections are celebrated. Only 6 out of 18 mayors that signed the act are reelected

Table 1 continuing. Summarized narrative of the main events occurred

02/04/2007	SMCV awards “ TAHAL Consulting Engineers Ltd. (Israel) for developing studies for a future waste water treatment system for 1,839,892 USD
Mar/2008	TAHAL Consulting Engineers releases a study for the waste water treatment system. The report proposes to divide the system in 2 separated plants (“ La Escalerilla ” and “ Los Tunales ”)
02/04/2008	The Montgomery Watson Harza company releases a Study for the potable water treatment system for the future “ La Tomilla 2 ” project
12/12/2008	The selected location for the construction of the waste water treatment plant “ Los Tunales ” is dismissed by the signature of a public act. The act states social, legal, technological and environmental unfeasibility. “ La Escalerilla ” does not present any objections.
Mar/2009	HC Consultants is hired for adapting the previous TAHAL proposal to a new location. HC proposes as the best option “ La Escalerilla ” and “ Location 2 ”
Aug/2009	SEDAPAR proposes “ Fundo Los Hurtado ” in the Uchumayo district as “ Location 2 ”
07/09/2009	The Provincial Municipality of Arequipa recognizes that the area of “ Fundo Los Hurtado ” is zoned as an agricultural area (not for urban uses)
20/09/2009	By Municipal Ordinance N° 053-2009-MDU the Uchumayo Municipality declares “ Of Interest ” the protection of agricultural areas and landscape reserve areas, meaning that the “ Fundo Los Hurtado ” location is not feasible
Oct/2009	Starting of the works for “ La Tomilla 2 ”
04/10/2009	The Engineer’s Professional Body of Arequipa states that the best option for Arequipa is that one of “ Pampa La Estrella ”
29/10/2009	SEDAPAR approved the project recommended by HC in “ Fundo Los Hurtado ” + “ Pampa La Escalerilla ” for 506’929,446 PEN. SNIP N° 93988
09/11/2009	The Architect’s and Engineer’s Professional Bodies of Peru supported the Uchumayo community on its opposition to the construction of the plant in “ Fundo Los Hurtado ”. The head of the Architect’s Professional Body of Arequipa Ciro Rojas Tupayachi referred that the studies made by TAHAL (private firm hired by Cerro Verde) would have been inflated since an actualized valorization of the “ Pampa La Estrella ” project would be 70 million USD (it was 42 million USD in 2000) instead of the 160 million USD calculated by current TAHAL-HC estimations.
20/11/2009	SEDAPAR started the feasibility process of “ Pampa La Escalerilla ” and “ Fundo Los Hurtado ”. The mayor of Uchumayo (where “ Fundo Los Hurtados ” is located) left the SEDAPAR shareholder’s meeting as a sign of protest
14/01/2010	SEDAPAR made an informative workshop with the population of Uchumayo regarding the “ Fundo Los Hurtado ” treatment plant. The meeting is rejected by the local population
21/01/2010	The national government stated that “ Fundo Los Hurtado ” plant cannot be feasible if the Uchumayo population do not provide a “ Social License ” for the project.
15/05/2010	Deadline for contributing to the fund for developing the water treatment system. 10 district municipalities, the Regional Government and the National Government have not provided the referred funds. SEDAPAR is considering to divide the project in two for guaranteeing the feasibility of at least “ Planta la Escalerilla ” (18% of the total costs). Most of the elected mayors in late 2009 did not accept the proposal since it implied a compromise done by a former mayor, who in many cases was considered as a rival politician, making the proposal not to prosper.
15/11/2010	Call for tender of the waste water treatment plant in “ Pampa la Escalerilla ”
01/01/2011	SMCV obtained a net income of 1054 million USD in 2010
25/02/2011	SMCV considers a new \$3.5 billion expansion



Table 1 continuing. Summarized narrative of the main events occurred

20/05/2011	Announced adjudication of the "La Escalerilla" plant construction works
22/06/2011	SMCV and representatives from SEDAPAR, Municipalities and the Regional Government exposed the initiative to develop the waste water treatment plant in the "Quebrada Enlozada" area within the SMCV estate. An act (with no participation of civil society organizations) is signed
24/06/2011	The director of public affairs of SMCV Pablo Alcazar , communicated the will of SMCV to expand their extractive operations from 120000 tons to 360000 tons. Referred 3500 USD investment
25/07/2012	Opening of the "La Tomilla 2" plant
02/12/2011	Expected day for having a complete feasibility study for "Quebrada Enlozada" plant
Nov/2014	Expected opening of "Quebrada Enlozada" plant

Table 2. Proposed and Developed Water and Sanitation projects in Metropolitan Arequipa 1951 – 2012

Potable Water Projects	Waste Water Projects
	<p>"Chilpina" (built in 1969)</p> <ul style="list-style-type: none"> • Treatment capacity: 130 l/s according to SEDAPAR • Developer: Public • Development costs: N.A.
<p>"La Tomilla 1" (built in 1951-1974)</p> <ul style="list-style-type: none"> • Treatment capacity: 1315 l/s • Developer: Public • Development costs: N.A. <p>Located at 2495 m.a.s.l</p>	<p>Conurbated with urban areas, it constantly generates complains regarding environmental pollution.</p> <p>"Pampa La Estrella" (proposed in 1999 and rejected in 2008)</p> <ul style="list-style-type: none"> • Study made by: "GITEC-FICHTNER" GERMANY, Engineers Professional Committee (financed by SEDAPAR, public funds/user charges) • Supposed treatment capacity: 4100 l/s • Development costs: 161M PEN <p>This project counted with full support from the National Government and was supported by the Arequipa Master Plan 2002-2015 and the SEDAPAR optimized Master Plan; being considered as compulsory by law. Albeit the project's compulsoriness, the agreed feasibility, the social license and the availability of both funds and land; it was suspended for years and then rejected by SEDAPAR later in 2008.</p>

Legend:

- Built projects and projects in progress
- Non-built projects

Table 2 continuing. Proposed and Developed Water and Sanitation projects in Metropolitan Arequipa 1951 – 2012

Potable Water Projects	Waste Water Projects
	<p>“Los Tunales” (proposed and rejected in 2008)</p> <ul style="list-style-type: none"> • Study made by: “TAHAL Consulting Engineers” ISRAEL (financed by SMCV) • Supposed treatment capacity: 2227 l/s • Development costs: 397M PEN
<p>“La Tomilla 2” (built in 2012)</p> <ul style="list-style-type: none"> • Study made by “Montgomery Watson Harza” USA (financed by SMCV) • Developer: “Consortio Alto Cayma” SPAIN-PERU (financed by SMCV) • Expected treatment capacity: 3000 l/s • Development costs: 302.3M PEN • Management: SMCV (for the first 2 years) and SEDAPAR for the ongoing years. <p>Located at 2800 m.a.s.l it would expand the gravity supplied potable water system.</p>	<p>TAHAL’s report provided a set of financial reasons in order to disallow the former FICHTNER alternative in “Pampa la Estrella”; changing its technological content in order to inflate its costs (from 161M to 467M PEN).</p> <p>“Fundo Los Hurtado” (proposed in 2009 rejected in 2011)</p> <ul style="list-style-type: none"> • Study made by: “HC y Asociados” SPAIN (financed by SEDAPAR) • Supposed treatment capacity: 2227 l/s • Development costs: 507M PEN <p>Only one year after the delivery of the TAHAL proposal, the new document presented a new valuation of the unchanged FICHTNER alternative (546 million PEN).</p> <p>“Pampa La Escalerilla” (proposed in 2008; to be finished in 2013)</p> <ul style="list-style-type: none"> • Study made by: “TAHAL Consulting Engineers” ISRAEL (financed by SMCV) • Expected treatment capacity: 247 l/s • Developer: Private “Acciona Agua” SPAIN (financed by SEDAPAR and local governments) • Development costs: 55M PEN <p>“Quebrada Enlozada” (in consultation since 2011)</p> <ul style="list-style-type: none"> • To be financed and developed by SMCV • Supposed treatment capacity: 2227 l/s <p>Project to be developed within the SMCV extraction area following the alternative recommended by TAHAL and “HC y Asociados”. This proposal from SMCV rise in a moment when it is arranging a massive 3.5 billion USD expansion that would increase its water demand in extra 1 m3 per second; being officially implied that the referred expansion is a necessary precondition for building the treatment plant.</p>

Legend:

- Built projects and projects in progress
- Non-built projects

5. Short analysis and summarized conclusions

The events just presented show that a project whose decisions were supposed to be taken by the second half of 2006 was delayed until 2011 when SMCV made public its intentions to develop the project inside its own mining camp; in close relation to a massive 3500M USD expansion of its mining activities. The perception of a number actors support the idea that the timing of the initiative from SMCV to finally develop the wastewater system is not a coincidence; and while the first expansion of SMCV activities in 2004 was the cause of the first conflict, the second expansion (four times bigger) has been managed to occur at the same moment when the issue of the pollution of the Chili river has reached its peaked point and the “solution” of the water and sanitation problem is generally perceived to be in hands of SMCV due to the incapacity of local authorities to solve the problem. These perceptions converge on the fact that not considering the issue of waste water treatment back in 2006 was an interesting political strategy from SMCV since they were aware of their future expansion and requirement for more water as early as in 2005; meaning that the strategy from SMCV was to “win some time” taking advantage of the lack of political decision of the local authorities.

Considering the general discontent from the population not precisely to the mining company but to the Government and SEDAPAR regarding the lack of action for decontaminating the Chili River, SMCV acquires enough maneuver space for negotiating the expansion of their operations and their future water demands in a national

context of conflictivity. In general, the institutional framework that supports the national development model permits private mining companies to directly assume public service provision roles, since positive externalities such as employment or value chains formation are very small for the case of mining activities and do not generate enough social and political recognition. This acquired role legitimizes them in front of the local population, but also increases already negative perceptions on the legitimacy and efficiency of local authorities exacerbating economic dependence and creating new forms of political clientelism.

The case-study has pointed out a very particular approach to the governance of large scale projects in Peru by displaying two types of interrelated projects: on one hand fully private projects; and public interest projects developed by private agents on the other hand (the two expansions of SMCV’s and the development of the water and sanitation system for Metropolitan Arequipa respectively). Both are in different ways closely related to the subsistence of the Peruvian extractivist model. The former are considered as the main manifestation of FDI and economic growth and constitute an irreplaceable source of taxes, canon transfers and fiscal stability; and the latter perform as effective negotiation tools for developing these private projects that otherwise would be surely contested.

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VIII Appendix 8: Durban

The Development of the King Shaka International Airport and the Dube TradePort:

An Examination of the Dynamics Surrounding a Megaproject in a South African City

Glen Robbins

1. Introduction

This summary provides an overview of material gathered in relation to research conducted on the development of the King Shaka International Airport (KSIA) and Dube TradePort (DTP) in the City of Durban, South Africa. The City of Durban, and the projects under review (located on the same site some 35kms to the north of the Durban city centre) both fall within the administrative boundaries of the Ethekewini Metropolitan Municipality – South Africa’s second metropolitan municipality by population. The KSIA and DTP are explored in the light of observations by a range of commentators that cities and city-regions and other spheres of government are investing considerable resources in the development of so-called “mega-projects”. Whilst not necessarily being new phenomena, these projects have become synonymous with objectives related to enabling the alignment of possible urban development trajectories (and often land uses and infrastructure) with a range of economic opportunities. They can be characterised in broad terms as being entrepreneurial in their orientation as they are specifically designed to enhance the competitiveness and profitability of economic actors who would then, in turn, generate improved levels economic growth and job creation so sought after in many cities (see for example Doucet, 2012).

The KSIA opened for flights in May 2010 and replaced an airport to south of the city centre of Durban nestled amongst industrial installations that dominate the urban landscape south of the Port of Durban – South Africa’s busiest port. The project to open a new airport on a greenfield site on the northern fringe of the metropolitan boundary was initiated and driven by the Provincial Government of KwaZulu-Natal. The case for the relocation was intertwined with the proposed co-location of a range of publically funded export-oriented infrastructure and services at the KSIA aimed to

better position the region to take advantage of global economic opportunities. The trade connectivity provided by a modern airport within a well planned “aerotropolis” (see Kasarda, 2000) would help serve reinforce an export-oriented development path, not just for the City and Province, but also for the Country as a whole.

The KSIA and DTP are interesting in the landscape of urban mega-projects discussed in the literature (see Kennedy et al, 2011) in that they constituted an initiative that, for much of the process of their conceptualization and promotion by the Provincial Government, did not directly involve or have the full backing of the local government in Durban (and for a period of time also had to proceed without central government backing). The projects, which formed part of the same initiative until their delivery, were also driven in very direct terms by Provincial Government State actors and did not manage to build a strong private sector coalition, yet were presented in very clear terms as being conceived of primarily to support the business prospects of existing and emerging companies, both local and multi-national. This carried through into the project financing which was in the main through national government funding for the airport via its airport parastatal company (Airports Company of South Africa) and for the Dube TradePort through the Provincial Government of KZN. The scale of the project (larger than any single other public investment in the City in recent times) caused some considerable disruption to the urban planning process in the Ethekewini Municipality as mixed signals were being sent around whether or not the project had the support of local government. As a result, a process transpired whereby both city planning and resource allocations had to adjust in order to accommodate the eventual reality of a new airport. Although the municipality remains somewhat skeptical of the grander claims of the project for an “aerotropolis” status, today the municipal officials acknowledge the airport as being central to the economic positioning of the city and also having to require commitment of resources to align with a development growth thrust to the north.

2. Mega projects in the South African urban context

South Africa has had no particular policy thrust in support of mega projects in urban spaces. Although no

urban policy framework has been adopted at a national level, various drafts talk rather about scaling up project activity aimed at meeting the needs of the urban poor, although there is a strong appreciation in these documents for the need for cities to ensure they remain integrated with national and global economic processes. The implication of this is that cities need to find ways to invest, together with other actors, in infrastructure to enable this global and national economic integration. Although formal policy documents at a national policy level do not suggest an endorsement of mega projects, the actions of government has tended to be one where large scale urban projects are given some considerable attention and political backing. This was particularly noticeable in the context of the 2010 FIFA World Cup bid and subsequent implementation. This also saw the creation of a national grant fund to support local government in delivering new stadiums and upgrading transport infrastructure.

South African cities and their municipal governments have all, at various points in time, associated themselves with a desire to initiate and support large scale urban projects with both social and economic aims. Because of revenue constraints, and with the exception of the 2010 World Cup and major transport parastatal investment – especially in ports – more large scale urban projects had been planned than actually delivered. The 1990s saw a rush of conference centre developments, although there were some other major project examples such as the Nelson Mandela Bridge in Johannesburg. Local governments also supported very large-scale mall developments on the city periphery where they provided some road and utility investments in support of major private sector investment.

3. Mega projects and urban development in Durban

In the early 1990s, following on a process of extra-local government dialogue between organized business formations, some anti-apartheid civil society groupings and some supportive political parties, an initiative called Operation Jumpstart was launched in Durban. This was geared to get partners to work together around improving education through a corporate funded school building programme in disadvantaged areas and through working in support of growth and employment in the greater Durban area. This group promoted the idea of building a convention centre which become concretised in the transition around 1994, resulting ultimately in the Durban funded International Convention Centre (ICC) being opened in 1997 as South Africa’s premier international meetings destination. This process brought a variety of public sector

and private sector players together around big project discussions on a regular basis and the apparent success of the project gave a variety of these local leaders confidence to explore other projects that started to be termed as Flagship Projects in the municipality’s documentation and in the public discourse. Local government in what had been the City of Durban (or the Durban Corporation) was uniquely placed to invest in these initiatives because it was the South African city with the best financial resources developed through years of prudent fiscal management during the late apartheid period. The municipality could thus fulfill its commitments around addressing backlogs – which it managed to do at a rate faster than other large cities (although with a much deeper set of backlogs and a higher proportion of households in poverty) – and also begin to explore a more ambitious economic programme.

The pursuing of “flagship” projects is reflected as key during this period by city officials and in a variety of documents where they are often listed as part of the city priorities and in the city’s economic strategy. They are also given some considerable mention by business members of a public-private dialogue group called the Durban Growth Coalition in reflecting on this period. The set of initiatives getting attention during this period also included the awarding of two casino licenses associated with new hotels (a process administered by the under national legislation) and a variety of other private sector led developments. Within the process it is also notable that agreement was also reached on expanding the ICC with public funds.

This was also reflected in municipal documentation which has consistently given attention to flagship or strategic projects in the framing of city challenges and strategic responses. Such a focus was also communicated through maps used in support of these documents and from presentations done by municipal officials.

In the eThekweni 2003 Integrated Development Plan (IDP), the Municipality specified one of its propriety programme areas as “Strengthening the Economy” and under this item specified actions as, (1) regeneration of key economic zones CBD/SDB; and (2) flagship projects eg. (Point redevelopment) (eThekweni Metropolitan Municipality, 2003: 14). Later on in same document the municipality plans around infrastructure delivery are also specified as being aligned to the meeting of basic needs as well as, “Be highly responsive to the service delivery needs of economic growth generators within the context of the SDF.” (eThekweni Metropolitan Municipality, 2003: 26). Of particular noteworthiness is the budget information in the document which specified the allocation of a sum of over R1,262 billion for “Flagship projects” over a the period 2002/2002 to 2005/2006 including the following:

- uShaka Island (theme park and aquarium)
- Effingham / Avoca mixed use industrial park
- ICC Expansion (Convention centre)
- Point Precinct Development (inner city waterfront tourism and commercial investment)
- La Mercy Airport (later KSIA and the associated DTP)

(eThekweni Metropolitan Municipality, 2003: 38)

also steadily grew its international connections with a variety of airlines flying to international destinations from the city. In the early 1990s, with traffic growing considerably, the airports company made a decision to invest in refurbishing the facility, expanding parking and upgrading air-side services. During this time a lobby group arguing for the movement of the airport to the northern part of the city was constituted and in 1994 given official backing by the KwaZulu-Natal Provincial Government who started to fund some of its activities.

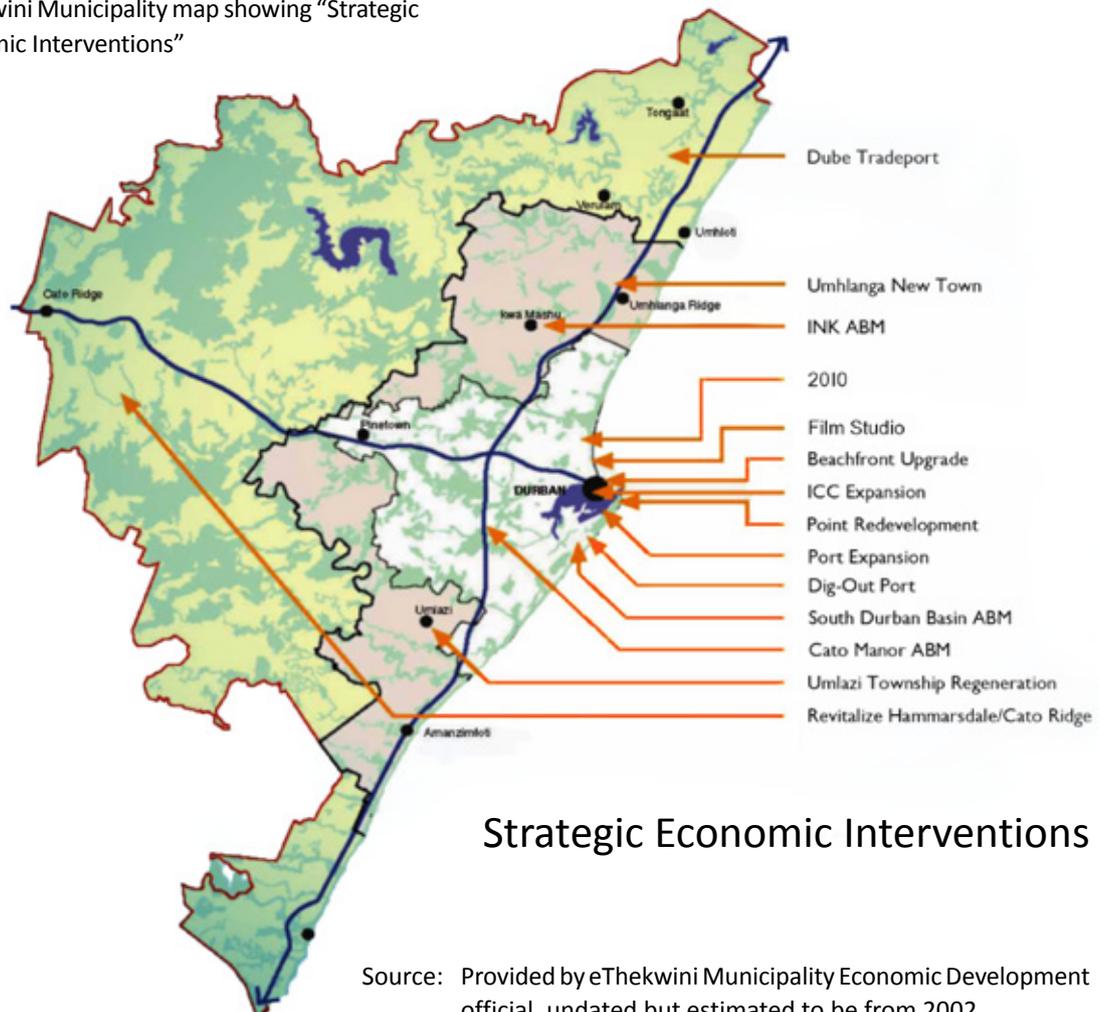
4. The King Shaka International Airport and the Dube TradePort

The background

The former Durban International Airport was opened 1951. It grew its passenger base steadily through the 1960s, 1970s and 1980s from tens of thousands of passengers through to over one million in the 1980s. In this period it

From this point forward the issue of the airport relocation remained firmly on the agenda of a range of stakeholders – led by government - until the actual relocation in April 2010. In this time the process moved from one of an ad-hoc committee consisting of co-opted members from the public and private sector, to the creation of a project team within the KZN Provincial Government to make the case for, and subsequently to plan the new facility. This process was a complex one with many competing ideas and issues at stake as is outlined below.

Figure 1. eThekweni Municipality map showing “Strategic Economic Interventions”



The case made for the development of a new airport and the closing of the former site

In the first instance the case made for development of the northern or LaMercy site, made by the KZN Provincial Government steering committee in the mid 1990s, involved two basic arguments. The first of these, and the primary argument, was that the DIA site had its runway length constrained by other land-uses which made it unsuitable to handle newer classes of intercontinental passenger aircraft. The argument made here was that an expanded runway length at new site, along with more extensive and improved facilities at the more spacious LaMercy location, would make it possible to attract more international carriers back to Durban and thereby enhance the city and the region's global connectivity to the benefit of tourism and other business. The secondary argument was that the location of the airport, in the city's industrial heartland was not conducive to promoting its tourism potential which was often stated to be stronger to the north of the city than to the south.

During the 1996-2000 period, there was growing interest in the significant expansion of the Port of Durban alongside major new industrial development. A variety of economic and planning studies conducted for local government in Durban (such as the South Durban Basin Strategic Environmental Assessment) and the reports of the Durban Spatial Development Initiative (funded jointly by the national Department of Trade and Industry and the Durban Metropolitan Council) made the case for significant re-organisation of the port and back of port industrial, logistics and residential areas to enable this land use to reflect these demands for new industrial and logistics investment. During these processes a case started to be made that the airport relocation could be justified as the DIA site (in excess of 700 ha) could be developed into a combination of port, logistics and industrial uses.

The 1999 national and provincial elections changed the balance of power in KwaZulu-Natal Province with the African National Congress (ANC) becoming the majority party. The provincial Department of Economic Development and Tourism had shown some considerable interest in the airport project. During the early 2000s it became clear that the Airports Company of South Africa (ACSA) was, for a variety of reasons, very much against the idea of relocating the Durban airport to a new location. Alongside these processes, a Provincial working group, that later became the Dube Tradeport Company (a subsidiary of the Provincial Government's development finance institution, Ithala), was formed. Considerable strides were made by this group in the commissioning of both technical and socio-economic studies around the airport development by a combination

of domestic and international consultants. These studies tapped into some changing sentiment reflected in the national policy frameworks which sought to support regions in their attempt to engage more with the global economy (for instance in the National Spatial Development Perspective) and later the ASGISA framework (Accelerated and Shared Growth Initiative for South Africa). Ultimately ACSA was instructed by the National Minister of Transport, Jeff Radebe, to proceed with reaching consensus with the Province on the project after a resolution to that effect in the national cabinet.

The figure below (Figure 2) provides an indication of the key steps in the timeline of the development of the KSIA and DTP from their early origins to more recent events.

The performance of the King Shaka International Airport and Dube TradePort since opening

Durban International Airport, and since 2010 King Shaka International Airport, have played an important role in the regional economy, although at a less significant scale than that of the Port of Durban. Employment associated with the airport at its relocation was estimated at between ten and twelve thousand including apron services, retail, security, airlines and car hire and a variety of indirect employment effects in the local economy such as hotels, travel agencies, transport businesses etc. The status of the region as South Africa's largest domestic tourism destination and a strong business traveller profile has seen the airport passenger numbers grow significantly in the last decade. This was despite the losses in traffic associated with the decline in international connections during the late 1980s and early 1990s linked to airline restructuring and the Airports Company of South Africa and South African Airways' strategy to hub international services in Johannesburg. Today KSIA is third in terms of passenger numbers behind Johannesburg and Cape Town although the current figures of 4.7 million passengers are in line with those assessed for the former Durban International Airport (DIA)⁵⁰. In 2000 the DIA reported passenger numbers of 2,495,715 showed a 15 percent year-on-year growth in passenger numbers associated with rising economic growth in the country and a measure of air services deregulation (Institute of Natural Resources, 2006). The former DIA was targeted to reach a

⁵⁰ In 2010 shares of passenger numbers between the main airports were as follows: Johannesburg at 55.8 percent (18.3 million); Cape Town at 24.5 percent (8 million) and Durban at 14.4 percent (4.7 million) (Personal communication with ACSA regional manager). (Note: The remaining passenger shares distributed across smaller regional airports).

level of around 4.5 million passengers a year by the end of 2010 and this was projected to rise again to around 5.3 million for 2011⁵¹.

Air cargo is somewhat more difficult to reflect due to difficulties in accessing comparable data over time. However, it is clear that this has been and remains at present a fraction of total freight tonnages in the city – something that the new KSIA and DTP were explicitly targeted to address. Figures available suggest that air freight volumes during the last decade at the previous DIA barely exceed 5,000 tonnes annually⁵² compared to a figure of around 290,817 tonnes handled at Johannesburg International Airport in 2008 (International Civil Aviation Organisation, 2011).

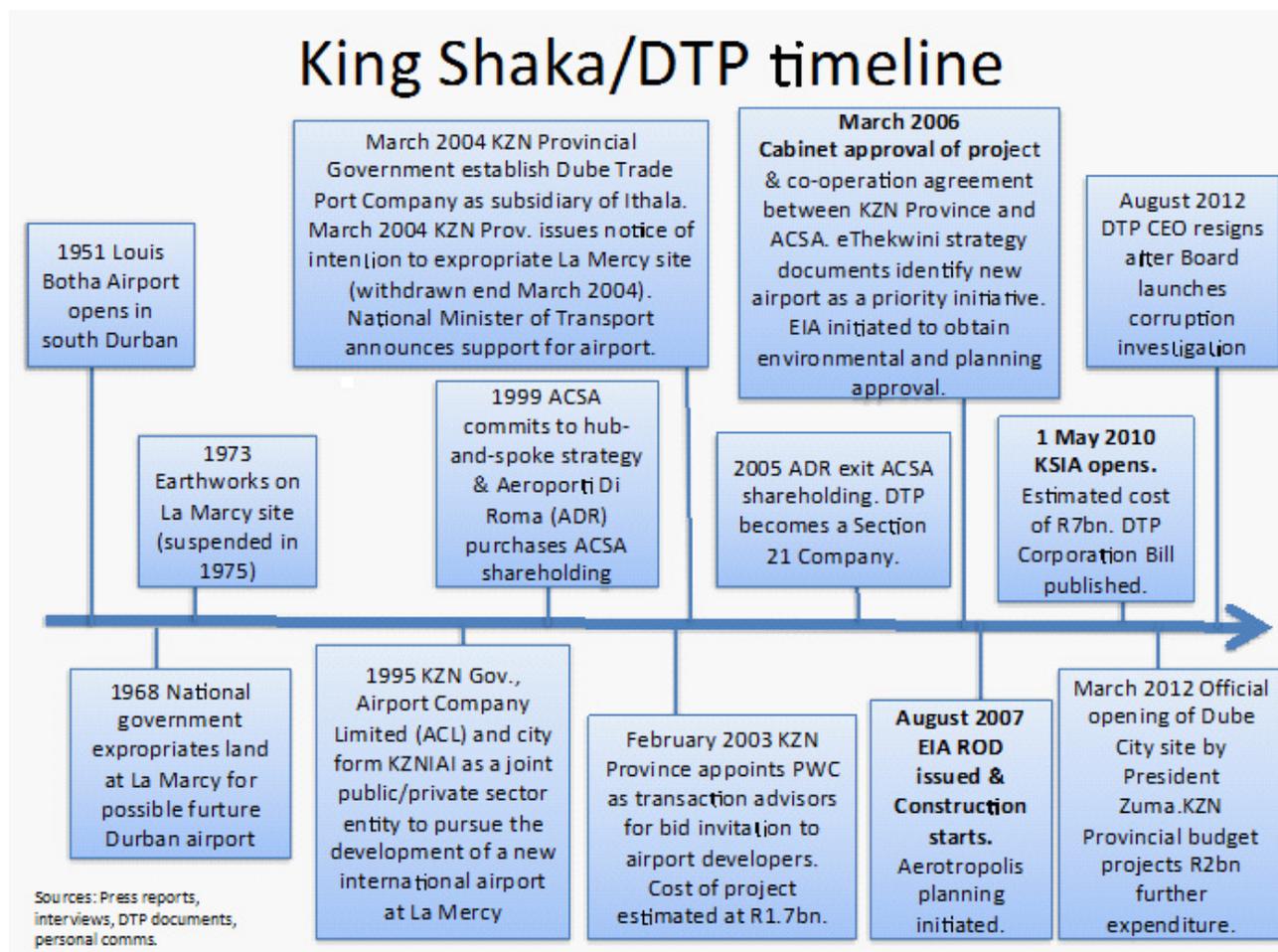
51 With installed capacity for around seven million passengers at the airport (Personal communication, ACSA Communications Manager, 2011).

52 The last available figure before the airport was closed in 2010 was 6,375 tonnes of freight through Durban International Airport. (KwaZulu-Natal Department of Transport, 2011)

In the period since the new airport and its associated freight facilities were commissioned in May 2010 some important developments have taken place and are worth noting in the context of this paper. Emirates have extended a tentative international service to the important freight hub of Dubai which offers some belly freight capacity with the long-haul passenger service. Whilst this was initiated in the previous airport it is the most important scheduled international service on offer in both freight and passenger terms at present. The new airport has also welcomed non-scheduled dedicated freighters with order-specific cargos⁵³. Despite the considerable post-2008 global slow-down in air freight

53 “On Tuesday the 7th of September 2010, Dube TradePort welcomed the majestic Emirates Sky Cargo Boeing 747-400F as it touched down at King Shaka International Airport at 19h00 from Dubai. It was carrying 110 tonnes of off-shore drilling equipment, destined for the Durban harbour.” (Dube TradePort, 2010b) (<http://www.dubeTradePort.co.za/News/EmiratesSkyCargoBoeing747-400FlandsatDubeCargoTerminal>, accessed 9 September 2010)

Figure 2. KSIA and DTP development timeline



traffic⁵⁴, respondents associated with the airport have indicated that there has been growth in volumes although these remain somewhat muted due to general economic conditions.

The corruption controversy that rocked the project in 2012 – one that resulted in the CEO resigning – was also a blow to the ability of the project to realize its very ambitious objectives as set out in the various documents used to sell the project at its outset. Although the DTP Corporation Board indicated it was business as usual and it must be pointed out that the allegations remain unproven in court, the concerns around a very tainted governance environment are also likely to impact negatively on performance. A private sector respondent noted that the combination of vast swathes of land in the hands of a government agency together with a large budget is one that has often attracted very dubious deals, not just in South African experience, but also internationally.

5. Some preliminary reflections on the fieldwork

These reflections try to tease out some of the issues that have been identified. In some cases they are quite speculate, but are generally founded on perspectives articulated by respondents interviewed for this study.

On mega projects in urban policy

The country's urban services backlogs required large scale, bold programmes to make an impact at scale in a desired time period. This was primarily seen in terms of basic services (and related bulk infrastructure) and settlement (housing) that have dominated the city capital and operating budget for well over a decade. However, it was notable to all respondents that at various moments the municipality and other actors had little choice but to make major "flagship", "catalyst" or "game-changing" investments in the urban space to secure a stronger economic positioning and to leverage economic success. This was necessary in a context where other investments were lacking, growth of the economy

and employment was well below acceptable levels and demands from communities for better income and employment prospects were growing. More often than not the respondents indicated that these choices were made, with private sector backing, but not with any substantial private sector investment or risk and that they were in types of activities where private sector returns from the facilities themselves were limited but would be generated by the downstream activities that would be leveraged.

On the relations and interactions between stakeholders

In terms of stakeholder interactions around mega projects in Durban the comments above need to be taken account of. Much of the time and energy in these projects, according to those involved, is about negotiating through complex political relations – often between groups in the same political parties. These relations are core to State invested and State driven projects proceeding and are also seen as the greatest risk factor. As one respondent pointed out, "one must be careful that your political champion does not fall out of favour as this could at best delay or at worst scupper the project." (Municipal official interview) These relations often have to be secured at the local, provincial and if the project is large enough, also at the national level. One observer external to these processes noted that these processes were generally behind closed doors and inevitably involved deals to bring enough consensus together. Here it is worth noting that a previous municipal manager from the eThekweni municipality pointed out that this type of deal making is part of local government all around the world and is not unique to South Africa.

On knowledge in the project

The airport development case provides a very strong case for how widespread the notion that large-scale projects are almost inevitable within fast growing urban cities as they seek to respond to the demands of growth and the need to deliver services to citizens. It is widely acknowledged that these have trade-offs, sometimes substantial ones, but these are seen as necessary to confront and negotiate in a context where big projects "have to happen". Pressures of costs that are incredibly sensitive to delays and changes in project scope are common in these projects but are also seen as driving decision makers to at times act "more decisively" as one respondent put it or perhaps with less sensitivity to widening the range of concerns that needed to be

54 "IATA [the International Air Transport Association] reports international air freight volumes ([freight-tonnes-kilometers] FTKs) fell an unprecedented 22.6% in Dec-08, as companies worldwide run down their inventories, abruptly cutting output and shipments. Exports of goods fell 20-30% in the US, Asia and Europe and air freight suffered proportionately, according to the industry body." (Centre for Aviation, 2009)

accommodated. It is also clear that in the local context major project influencers have used extensive expert studies and reports to build a case for projects that often draw on “best practice” or international examples and tend to work on the assumption that such initiatives need to meet some notion of world class performance. Community stakeholders generally felt excluded from these processes to develop common sets of knowledge.

6. Conclusion

The process by which a decision was made to develop the Dube TradePort and King Shaka International Airport was a lengthy and complex one. Clearly the backers of this project – mainly the Provincial Government – saw this as a critical element of helping to reposition the region for greater integration with the global economy in a manner that would confer particular competitive advantages to the regional economy. This project was driven by entities with the backing of the Provincial Government in such a manner that it was ostensibly oriented to serve private sector development interests but with very little institutionalized participation from the private sector. It was also subject to a series of complex struggles for influence between local municipal role players and Provincial Government officials and their representatives. Municipal officials had real concerns about the impact of the project on the spatial structure of the city and tended to exploit the lukewarm response to the project by municipal leadership in arguing that municipal priorities lay elsewhere. However, the sustained push by the Provincial Government and the ability to swing some national influence in their favour resulted in municipal government having little choice but to engage and ultimately support the project. Whilst many in the private and municipal sector still express considerable reservations about the project, it is now accepted by almost all public and organized private sector actors as a core focus area for ongoing investment and government focus. These processes provided little space for meaningful engagement with actors outside the realm of these more powerful institutionalized interests.

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