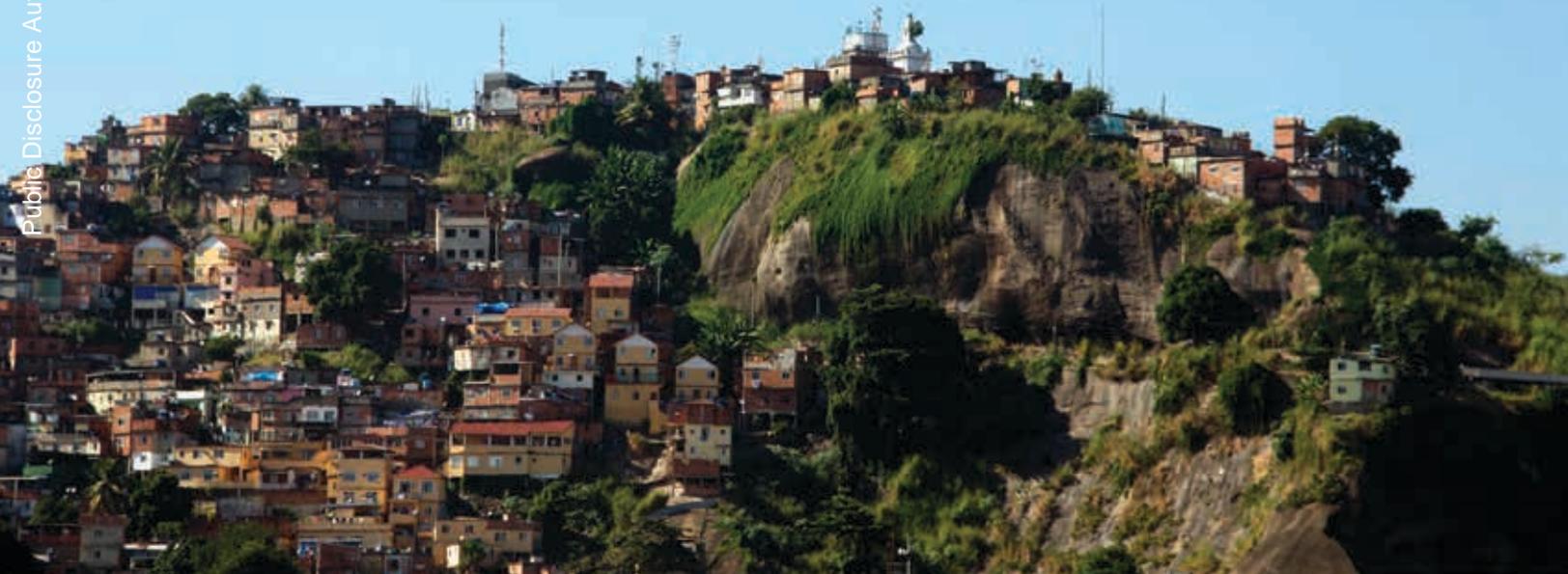


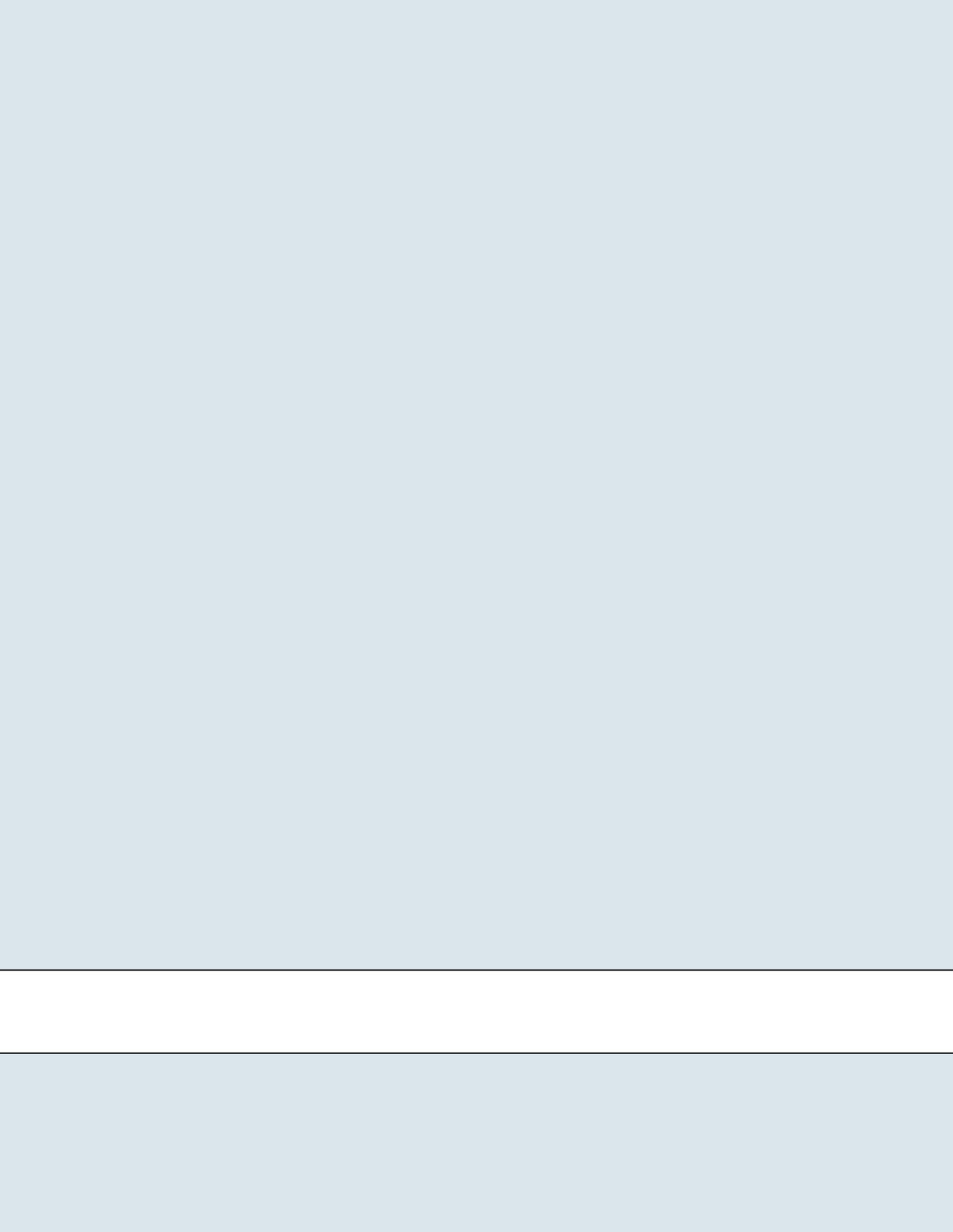


# METROPOLITAN GOVERNANCE IN BRAZIL:

**Inputs for an Agenda and Strategy**

May 2015





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## ABBREVIATIONS AND ACRONYMS

BH	Belo Horizonte
BNH	Banco Nacional da Habitação (National Housing Bank)
CAF	Comitê de Articulação Federativa (Committee for Federal Articulation)
CETESB	Companhia Ambiental do Estado de São Paulo (Environment Company of the State of São Paulo)
CONDEP/ FIDEM	Agência Estadual de Planejamento e Pesquisa de Pernambuco (State Agency of Planning and Research of Pernambuco)
FGTS	Fundo de Garantia por Tempo de Serviço (National Pension Fund)
FPM	Fundo de Participação dos Municípios (Fund of Municipal Participation)
CONISUD	Consórcio Intermunicipal da Região Sudoeste da Grande São Paulo (Inter-municipal Consortium of the Southeast Region of Greater São Paulo)
DNER	Departamento Nacional de Estradas e Rodagem (National Department of Highways)
EMPLASA	Empresa Paulista de Planejamento Metropolitano (Metropolitan Planning Company for the Greater São Paulo Metropolitan Area)
FGTS	Fundo de Garantia por Tempo de Serviço (National Pension Fund)
FUNDEB	Fundo de Manutenção e Desenvolvimento da Educação Básica (Fund for the Development of Basic Education)
GDP	Gross Domestic Product
IBGE	Instituto Brasileiro de Geografia e Estatística (Brazilian Institute of Geography and Statistics)
ICMS	Imposto sobre Circulação de Mercadorias e Prestação de Serviços (State Value-Added Tax)
IPEA	Instituto de Pesquisa Econômica Aplicada (Institute of Applied Economics Research)
IPTU	Imposto sobre a Propriedade Predial e Territorial Urbana (Municipal Property Tax)
ISS	Imposto sobre Serviços
MR	Metropolitan Region
MRBH	Metropolitan Region of Belo Horizonte
MRSP	Metropolitan Region of São Paulo
MTE	Ministério do Trabalho e Emprego (Ministry for Labor and Employment)
OECD	Organisation for Economic Co-operation and Development
ONG	Non-governmental organization
PAC	Programa de Aceleração do Crescimento (Growth Acceleration Program)
PDDI	Plano Diretor de Desenvolvimento Integrado (Participatory Metropolitan Master Plan)
PLAMBEL	Planejamento da Região Metropolitana de Belo Horizonte (Planning of the Metropolitan region of Belo Horizonte)
PMCMV	Programa Minha Casa Minha Vida (My House My Life Program)
PNAD	Pesquisa Nacional por Amostra de Domicílios (National Household Sample Survey)
PPP	Public Private Partnership
RSLs	Registered Social Landlords
RIDE	Região Integrada de Desenvolvimento Econômico (Integrated Economic Development Region)
RIDE DF	Região Integrada de Desenvolvimento do Distrito Federal e Entorno (Integrated Development Region of the Federal District)
ZEIS	Special Zones of Social Interest (Zonas Especiais de Interesse Social)

## FOREWORD

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In less than fifty years, Brazil evolved from a predominantly rural society and economy to a highly urbanized country in which 85 percent of its people now live in urban areas and more than 90 percent of the country's GDP is generated in the cities. This rapid urbanization process was characterized by a lack of planning and an enduring framework of inequality, resulting in high degrees of concentrated poverty in the urban areas.

Much of this urbanization has taken place in metropolitan regions (MRs). MRs have grown more rapidly than the rest of the country, both in population and in GDP terms. In 2010, per capita GDP was higher in MRs than in the rest of the country and metropolitan economies accounted for 70% of GDP. At the same time, half of the Brazilian poor and 90 percent of the people living in subnormal conditions were found in metropolitan regions.

MRs present diverse realities. To begin, there are differences between core and peripheral areas in each region, with peripheral areas characterized by lower access to basic infrastructure and services, mobility, jobs, affordable land, and housing. There are also important differences between MRs, e.g in terms of scale and wealth. Over 19.7 million people lived in the São Paulo MR (one in ten Brazilians) while only 2.1 million people lived in the Belém MR. The São Paulo MR produces almost 1/5 of Brazil's GDP and, in 2012, generated 1/4 of Brazil's tax collection; in contrast, the Recife MR makes up 64% of Pernambuco's GDP but represents only 1.6% of the Brazilian economy. Finally, there are large differences in the racial composition of the MRs with residents of the North and Northeastern cities of predominantly self-identifying as pardos (mixed origin) while residents of the South and Southeastern cities have larger populations that call themselves brancos (white).

After years of discussion, the recent approval of a new framework for metropolitan governance in Brazil – the Statute of the Metropolis – creates the opportunity for debate and evolution regarding several key issues. These include: a) placing metropolitan matters at the forefront of the development arena in Brazil; b) reviewing what has been learned about inter-municipal governance and service delivery; c) estimating resource mobilization needs for metropolitan development; d) coordinating metropolitan land use with transport and housing; e) including metropolitan concerns in any revision of fiscal federalism; and f) promoting environmental sustainability, social inclusion and resilience to disasters and climate change plans at the metropolitan scale.

The World Bank can be a partner in addressing these issues. In responding to Client demand, the Bank has been providing a range of support to Brazilian states and cities and especially their low-income populations in the areas of infrastructure, social services, slum upgrading, institutional development, river basin management, local economic development, environmental protection, water and sanitation, and transportation. In the future, we hope that this support can increasingly be delivered at the metropolitan level and through metropolitan structures.

This work is part of the Bank's knowledge generation and dissemination agendas. It is aimed at enriching and building a discussion space among our network of Clients and Partners.





## ACKNOWLEDGEMENTS

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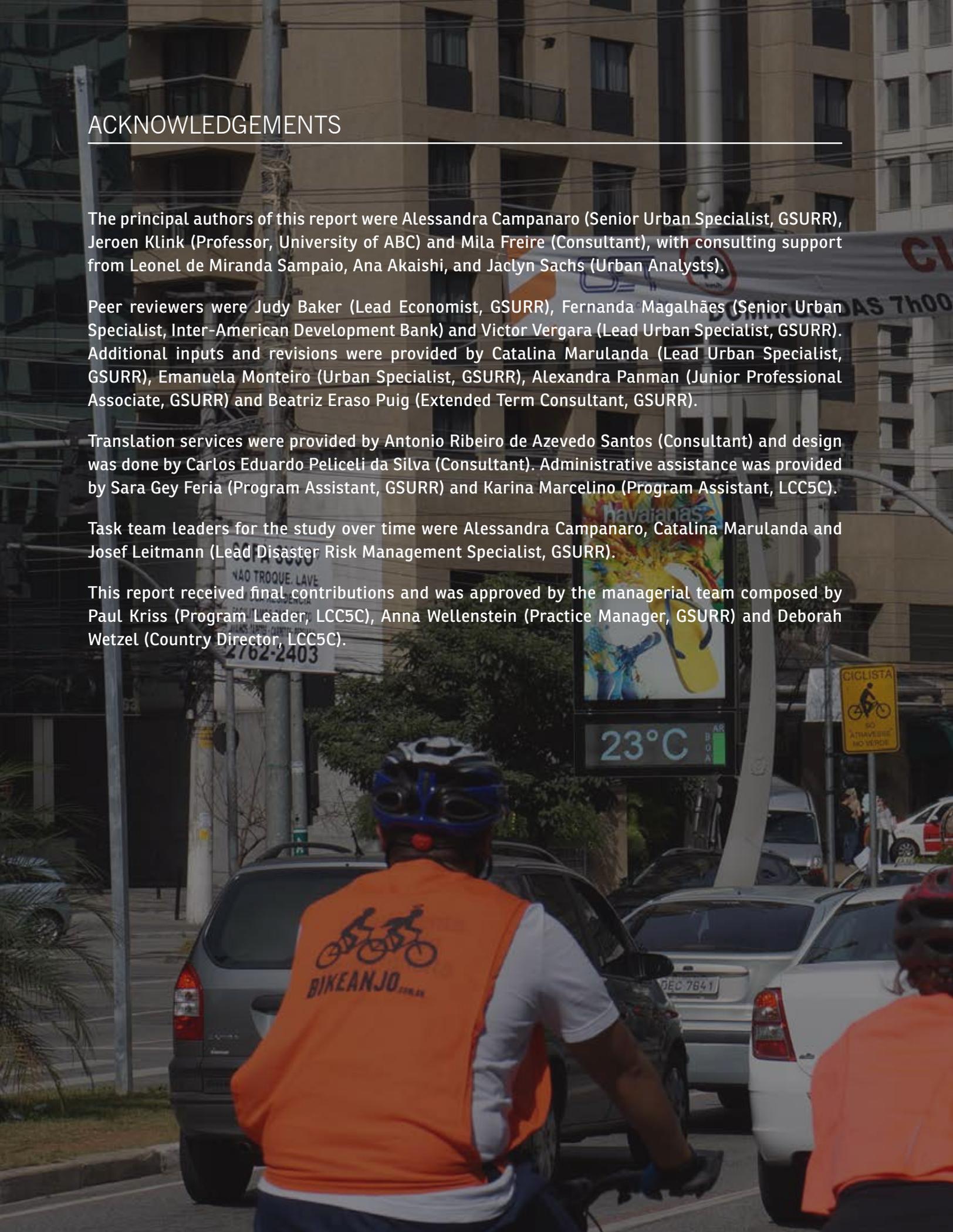
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## EXECUTIVE SUMMARY

**Brazil urbanized at a very rapid pace: the share of people living in cities dramatically increased in the past 40 years, growing from 56 percent in 1970 to 84 percent in 2010.** Since the turn of the century, Brazil's real GDP per capita has grown by 32 percent, while official poverty rates have fallen from 25 percent to less than 9 percent. Urbanization led to concentration of economic activity and population in selected areas, mostly around state capitals where infrastructure and economic growth acted as a magnet to private investment and job creation. Metropolitan areas<sup>1</sup> were formed through aggregation of municipalities of different sizes and levels of specialization, linked by connectivity, labor flows and economic exchanges. The metropolitan areas in Brazil together account for half of the population, about 60 percent of national GDP, and most of the country's economic and urban growth.

**The rapid economic development of the last decade led to deep spatial transformation.** Cities grew rapidly, but access to services was biased against the periphery where the new migrants were settling. Restrictive federal land use policies, lack of resources and insufficient planning lead to unresponsive supply of affordable housing in the proximity of labor markets. Low and middle income households settled in the outskirts, mobility became difficult and commuting times long. Economic geography dictates that during the early phase of urbanization, differences in income and services across regions are likely to increase. Core cities typically have higher incomes and better services than peripheral areas. As mobility increases and education and health levels improve, both income and access to services become more equally distributed. This convergence process is underway in Brazil, but it will take time to complete.

1. The Brazilian Observatorio das Metr opoles defines metropolitan areas as "conurbanated areas that are functional and integrated under the influence of a core city".

As of today, contrasts across metropolitan regions are still significant.

**In this process of spatial change and inclusion, what role has metropolitan governance played?** Would inequality and access to basic services be improved with a more aggressive metropolitan collaboration? What can be learned from metropolitan governance in Brazil and elsewhere? This report is a contribution to this discussion. Drawing from literature and data from Brazil, the report reviews the main concepts related to metropolitan governance, presents international examples, and discusses ideas relevant to the Brazilian case. The report is organized in seven sections: (i) principles and framework for metropolitan governance; (ii) metropolitan evolution in Brazil; (iii) economic and spatial dynamics of 15 selected metropolitan regions; (iv) case studies of three metropolitan areas (S o Paulo, Recife e Belo Horizonte); (v) financing; (vi) the new framework for metropolitan governance in Brazil – the Statute of the Metropolis (Estatuto da Metr opole); and (vii) observations and suggestions for the short and medium terms.

## ANALYTICAL FRAMEWORK

**The literature on metropolitan governance discusses criteria and modalities for efficient, equitable and accountable public service provision.** While there are large variations across countries and metropolitan regions, and it is well accepted that there is no one-size-fit-all model, some basic modalities for metropolitan governance can be defined, notably: jurisdictional fragmentation (or fragmented one-tier model), amalgamation (or one-tier consolidated model), two-tier government model, special purposes agencies, and voluntary cooperation.

The most typical model in highly decentralized countries is jurisdictional fragmentation, where local governments are responsible for delivering and financing public services. Amalgamation and two-tier models enlarge the size of the jurisdiction and enable greater efficiencies in service delivery, at the cost of merging several local governments. Horizontal collaboration can take the form of voluntary agreements or special purpose agencies that execute specific function on behalf of local governments.

## THE EVOLUTION OF METROPOLITAN GOVERNANCE IN BRAZIL

**The model of metropolitan governance in Brazil has evolved since the 1970s.** Several metropolitan areas gained legal status in the 1970s when the central government created nine metropolitan regions (MRs). Their function was mainly to channel investment for infrastructure in support of the industrial policy of the country. Financing was provided by national financing institutions such as the National Housing Bank (*Banco Nacional da Habitação*, BNH) and the Transportation Department. The 1988 Constitution transferred the power to create metropolitan regions from the central government to the state governments, in line with the decentralization trend. Municipalities were granted full federal status and made responsible for providing and funding basic services at the local level. Investment for infrastructure became scarce due to the fiscal crisis and several adjustment plans were necessary to control inflation. Per constitutional amendments in 1995 and 1996, pro-poor national policies were implemented in sectors such as education and health, with state and local roles clearly defined, including the share of revenues to be allocated to these sectors. The new Constitution did not provide a frame-

work for metropolitan governance, i.e., it did not lay out cooperative mechanisms to manage metropolitan regions or specific resources to finance them.

**The discussion of metropolitan coordination has been quite active since early 2000s.** The new millennia brought the approval of the City Statute (*Estatuto da Cidade*, in 2001), the creation of the Ministry of Cities (in 2003), and the approval of the Law of Public Consortia (in 2005), the later responsible for legalizing contractual arrangements among local governments for the delivery of services. The long debate about metropolitan governance has resulted, more recently, in the enacting of the *Statute of the Metropolis* in January 12, 2015. The Statute lays out basic principles aimed at improving coordination at metropolitan level, outlining responsibilities and proposing modalities for metropolitan governance.

**Tension between state governments and municipalities, lack of resources and continuing regional inequalities have increased the complexity of metropolitan governance.** The Constitutional arrangement in Brazil precludes the use of governance models existing in other countries and described in this report. The provision of services at a metropolitan scale tends to either be the outcome of inter-municipal cooperation or upper-level (federal or state) policy decisions, as is the case in education and health. Health is the sector with the largest number of cooperation agreements, as states and the federal government encouraged consortia among local governments to speed the implementation of the National Health System. Other municipal agreements have been promoted by the federal government, such as inter-municipal consortia, which are increasingly being used for a wide range of services.



## ECONOMIC AND SPATIAL DYNAMICS OF SELECTED METROPOLITAN REGIONS

**MRs are engines of economic growth, but socio-spatial disparities persist.** MRs have grown more rapidly than the rest of the country, both in population and in GDP terms. In 2010, per capita GDP was higher in MRs than in the rest of the country. In terms of concentration of high paid jobs, core cities concentrate a higher share of people earning more than 10 minimum wages and with higher education degrees. Based on Census data from 2000 and 2010, Gini coefficient values estimated for the core cities of São Paulo, Vitoria, Recife, Rio de Janeiro and Porto Alegre demonstrate a consistent increase in income inequality during 2000-2010. While some improvement was observed in Campinas, Manaus, Brasília, Goiânia, Belém and Curitiba, it was not enough to compensate for the exacerbation of income inequality that occurred in

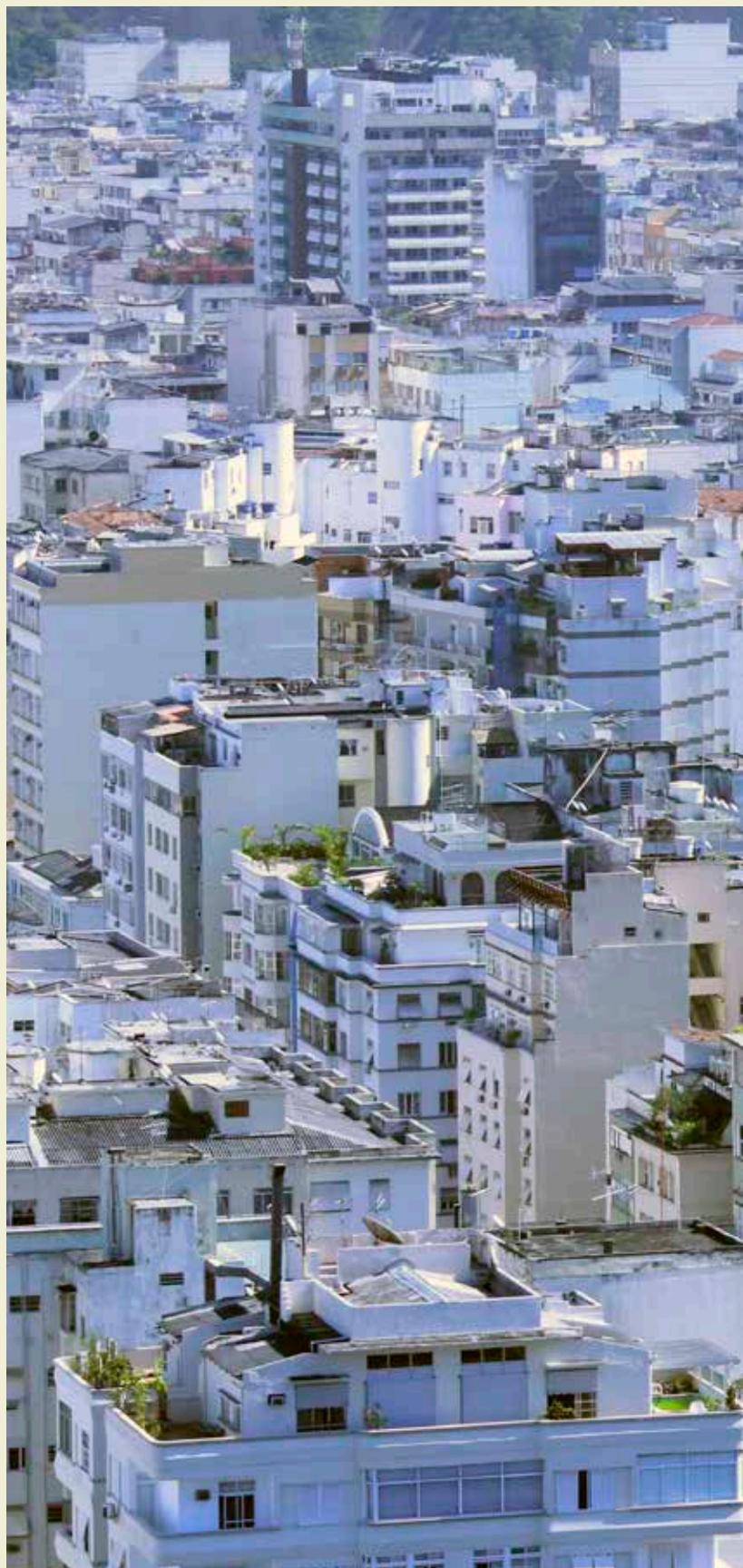
the 1990s. Higher wages in the core cities attract skilled workers. However, while the absolute number of high-income skilled workers in MRs increased from 2000 to 2010, their share in total employment decreased. By 2010, half of the Brazilian poor and 90 percent of the people living in subnormal conditions were found in metropolitan regions. Socio-spatial disparities persist, both in terms of income and access to basic services.

**The provision of basic services is gradually improving in metropolitan regions, but inequalities between the core and the periphery persist.** Although data show a clear trend of improved service provision in urban areas, particularly in the Southern and Central-West Regions, access to basic infrastructure (particularly sewage) remains deficient, primarily in peripheral municipalities. Growing and new population cannot afford the prices of land serviced with infras-

structure or close to the core city. Lack of adequate land use planning and absence of pro-active slum prevention characterizes most of the MRs, especially in the periphery. Housing units have grown in areas with relatively poor infrastructure, and slums have grown in the outskirts of metropolitan areas, aggravating mobility issues in already congested urban areas. This indicates the low elasticity of land supply for housing and shelter and shows the dynamics of the informal markets to answer a very clear demand for affordable land and shelter that is not adequately being addressed.

### CASE STUDIES: SÃO PAULO, RECIFE AND BELO HORIZONTE

**Three selected case studies - São Paulo, Recife and Belo Horizonte - offer an in-depth, qualitative look at metropolitan governance in Brazil and reflect the absence of a unique one-size-fits-all model of metropolitan governance.** The experiences show distinct approaches to metropolitan governance currently in place in these three MRs, which have taken an active role in shaping their institutional and policy structure. They exemplify the dynamism of metropolitan governance, whether led by the state or by municipalities, and offer an opportunity to extract lessons that could be of use in other MRs. São Paulo presents a compelling case due to the sheer scale of its challenges, the number of metropolitan initiatives that have taken place, as well as its experimentation with inter-municipal consortia and other forms of metropolitan governance. Recife's historic legacy of metropolitan planning sheds light on innovative participatory planning initiatives. Belo Horizonte is an interesting case study for demonstrating how civil society can contribute to metropolitan institutions.





## FINANCING

**In the comprehensive literature on Brazilian metropolitan governance, financing of metropolitan structures and/or services is rarely addressed.** The discussion often revolves around the best form that metropolitan committees can assume or who can mandate policies or investment decisions that have impacts at the territorial level. However, the definition of funding mechanisms, which is central to ensuring that metropolitan policies and investments can be implemented, is often lacking. At present, there is no legal or institutional framework for metropolitan regions to access resources. This topic is beyond the scope of this work, and therefore the report is limited to summarizing secondary sources of relevant fiscal data. However, an in-depth review of this issue is necessary to advance the metropolitan agenda in Brazil. The existence of reliable and predictable financial resources is an essential feature of any metropolitan arrangement that aims at planning and implement development projects, including infrastructure and long-term spatial development.

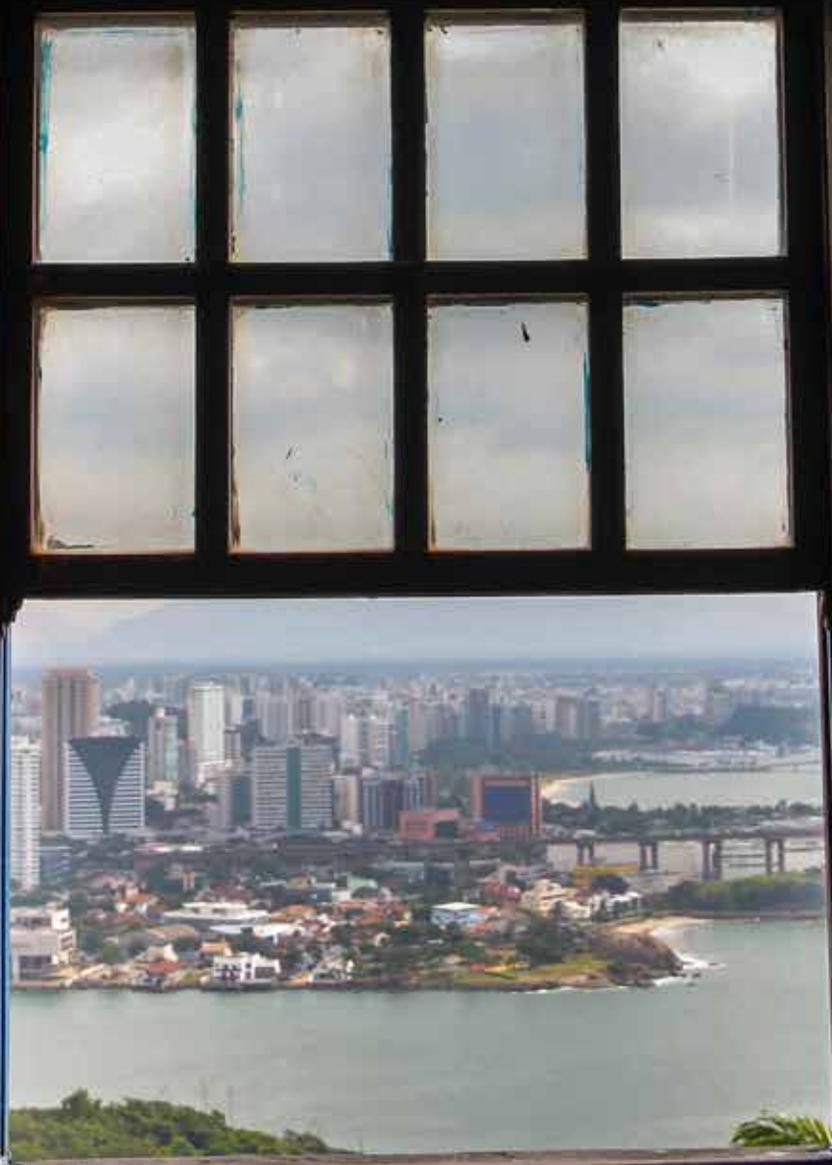
## THE NEW STATUTE OF THE METROPOLIS

**Following several years of discussion, in January 2015 the Statute of the Metropolis<sup>2</sup> was enacted.** This new law presents an opportunity to review metropolitan issues in Brazil and look at the most appropriate models and typology. It: (i) sets up general principles and guidelines for the planning, management and implementation of metropolitan-related matters of common social interest; (ii) encourages collaboration and partnerships for shared metropolitan management and governance across the various tiers of governments, through existing instruments (such as Public Private Partnerships – PPPs, Consortia, Urban Operations, Cooperation Agree-

ments, Concession Contracts, etc.); (iii) defines arrangements for metropolitan governance; and (iv) defers to states, through specific regulating laws, the responsibility of detailing such arrangements. In particular, the Statute of the Metropolis reaffirms the central government's responsibility to define a general policy framework for metropolitan areas.. States would continue having the responsibility of creating metropolitan areas, and establishing the guidelines and criteria for MR creation. However, and within the proposed governance structure, they are now obliged to develop integrated plans for metropolitan development. Cities, on the other hand, shall articulate their master and land use plans with the integrated state and metropolitan plans. By Constitution, cities will continue to be autonomous and free to enter into any metro arrangement they choose.

**Although the proposed legislation is a welcome development in Brazil's metropolitan policy, it does not fully address a critical aspect, which is the financing of the metropolitan agenda.** The principles are a solid point of departure from the past and reflect the preoccupation of the country to improve service delivery, reduce poverty and accelerate growth. The proposed development of a national policy framework for metropolitan areas is commendable and very useful. While the statute opens the possibility of financial support from the central government, its actual provisions are not so clear about it, as the original article on the creation of an specific fund for integrated urban development was vetoed. At the state level, the idea of using criteria for the establishment of new MR is practical, and used widely in the US and Europe. Experience shows that it will be better to keep the number of criteria small to reduce the bureaucracy in establishing new governance modalities. The mandatory preparation of metropolitan plans is another positive development. Integrated plans are useful and

2. Law no. 13.089/ January, 2015.



urgent to define land-use and other regulations to manage the location of new settlements. Finally, information on metropolitan and regional economy will be the basis of analysis and good policy. Therefore, attention should be given to: (i) the definition of data and diagnosis on economic and social patterns of metropolitan areas as an input to the long-term planning and to forecast investment needs; (ii) the collection of data on expenditures by sector and by MR; (iii) the analysis of the effectiveness and efficiency of spending.

## FINAL OBSERVATIONS

**Brazilian MRs are not exploiting the opportunities brought by agglomeration economies<sup>3</sup>, as evidenced by strong inequalities between the core city and the rest of the MR.** While strategic in terms of concentrating opportunities of economic development and addressing social deficits, MRs traditionally lack an appropriate institutional framework to guide the planning, management, and finance of their development trajectory. Metropolitan efforts across levels of government in the past decade have been significant – but yielded insufficient results. Consequently, the economic dynamism that is concentrated in MRs has not translated into proportionally better urban development and housing conditions. Metropolitan areas are still characterized by intense socio-spatial disparities and mismatches between land use, the availability of infrastructure, and the degree of accessibility.

**Much has been discussed on whether some forms of metropolitan government should be imposed as a way to promote forced collaboration or integration.** The federal status enjoyed by Brazilian local governments is not compatible with some forms of metropolitan governance such as amalgamated or two-tier structures. While these solutions are effective in handling redistribution in the provision of services, they

are unlikely to be a reality in Brazil, as they would require approval of the merged municipalities that would be losing their authority and taxing powers. The present system of one-tier or jurisdictional fragmentation is likely to continue, with local governments taking care of provision of services at local level, and re-distribution and equity being the function of the central government via national norms and policies. Voluntary associations have been successful, in line with what has happened around the world. Special purpose agencies to coordinate transport services and infrastructure, as in the case of São Paulo and Recife, will have an increasing role to play in extending urgent infrastructure and services.

The analysis of the Statue of the Metropolis, the experience of MRs in Brazil and the international experiences, point to a number of priority areas for the short and medium term.

### Short term:

- A. **Raise the profile of the metropolitan issue.** The *Statute of the Metropolis* provides an opportunity to position the metropolitan matters – planning, participation, tools and governance structure – at the forefront of the discussions. It would be important for the discussion to include the identification of key services or inequalities in service delivery at metropolitan level, and extend to include issues of economics, competitiveness, investment climate and comparative advantages.
- B. **Focus on what has worked.** A critical review of what has been learned with the voluntary collaboration among municipalities is urgent and could bring a great deal of ideas. Consortia that are effective in providing services at metro or regional level could evolve into wider special purpose agencies.
- C. **Estimate financing needs and strategies in metropolitan areas to mobilize resources.** There is a persisting gap which needs to be filled in the

3. Agglomeration economies refer to the the benefits that firms and workers enjoy as a result of proximity (WDR, 2009)



discussion around economic and financing aspects. A multi-source infrastructure fund to leverage investment financing should be considered in the future. This would require defining criteria, terminology, financial partners, and schemes to prepare project finance.

**D. *Instill the need to coordinate land use with transport and housing*** in all city and state plans and help cities to raise land-based revenues to finance infrastructure and social development. Planning visions for transit and land-use integration are crucial, and so is the adequate funding for successful execution. Transit and land-use integration can yield the income needed to expedite and support the process.

**Medium term:**

**E. *Evaluate whether a common framework for all metropolitan regions or flexible structures would be more efficient.*** It is important to

understand if the establishment of a common framework for the MRs – as set forth in the new Statute of the Metropolis – is the best option or if the definition of guidelines for flexible metropolitan structures would be more appropriate in the Brazilian context.

**F. *Include metropolitan concerns in any revision of fiscal federalism arrangements that may be discussed in the coming years.*** The fiscal federalism in Brazil has been a source of debate in recent years. If eventually a revision is undertaken by the government, it would be appropriate to include metropolitan finance issues into the debate.

**G. *Address sustainability.*** Promoting sustainability, reducing greenhouse gas (GHG) emissions, and preparing resilience plans are the focus of the international community dealing with cities and metropolitan areas.



## INTRODUCTION

**1. Brazil urbanized at a very rapid pace: the share of people living in cities dramatically increased in the past 40 years, growing from 56 percent in 1970 to 84 percent in 2010 (see Figure 1<sup>4</sup>).** Since the turn of the century, Brazil's real GDP per capita has grown by 32 percent, while official poverty rates have fallen from 25 percent to less than 9 percent<sup>5</sup>. This urbanization process led to concentration of economic activity and population in selected areas, mostly around state capitals where infrastructure and economic activity acted as a magnet to private investment and job creation. This process resulted in the emergence of a number of metropolitan areas. The Southeast and South capitals (Rio de Janeiro, Sao Paulo, Curitiba, Belo Horizonte) were the first to grow, followed in the last 20 years by cities in the North (Manaus), in the Center West (Brasilia and Campo Grande) fuelled by agro-industry boom and derived demand, and in the Northeast (Petrolina) as consequence of the development of the São Francisco valley (World Bank, 2006).

**2. These metropolitan areas – defined as areas whose economy passes over the city boundaries – comprised cities of different sizes and specialization, linked by connectivity, labor flows and economic exchanges.** Several gained legal status in the 1970s when the central government created nine metropolitan regions (MRs). Their function was mainly to channel investment for infrastructure in support of the industrial policy of the country. Financing was provided by national financing institutions such as the National Housing Bank (Banco Nacional da Habitação, BNH<sup>6</sup>) and the Transportation Department (Klink, 2008).

**3. In the following years, the model of metropolitan governance changed considerably.** In

line with the decentralization trend, the 1988 Constitution transferred the power to create metropolitan areas from the central government to the state governments. Municipalities were granted full federal status and made responsible for providing (and funding) basic services at local level. Investment for infrastructure became scarce due to the fiscal crisis and several adjustment plans were necessary to control inflation. Per constitutional amendments in 1995 and 1996 national policies were implemented in critical sectors such as education and health, with state and local roles clearly defined including the share of revenues to be allocated to these sectors. Metropolitan authorities seemed to lose importance.

**4. The rapid economic development of the last decades led to deep spatial transformation.** Cities grew rapidly but access to services was biased against the periphery where the new migrants were settling. Restrictive federal land use policies lead to unresponsive supply of affordable housing in the proximity of labor markets. Low and middle income households had to settle in the outskirts. Mobility became difficult and commuting times long.

**5. In the last decades, access to services has improved considerably, but residents in the periphery of the large metropolitan areas still show limited access to sewerage, water and sanitation.** Economic geography explains that during the early phase of the urbanization process, differences in income and services across places are likely to increase (World Bank, 2009). Core cities will have higher incomes and better services; the periphery will be in a worse situation. As the mobility factor increases and education and health levels improve, both income and access to services become more equally

4. Instituto Brasileiro de Geografia e Estatística (IBGE)

5. World Development Indicators (World Bank).

6. The National Housing Bank was created in 1964 to finance public housing. After its closure in 1986, Caixa Econômica Federal took over its functions and resources.



### **Box 1. Reducing social and regional disparities in Brazil**

Brazil's population and activity are highly concentrated; territorial disparities have decreased since 1965 but are still high compared with OECD standards. Most unsatisfied needs are concentrated in lagging regions, but there is been a process of convergence with the poorest regions moving towards the average performance. Key issues to enable a sustained regional growth include: (i) overcoming a multi-dimension fragmentation of policies; (ii) dealing with sub-national government's financial and political autonomy to achieve policy coordination; (iii) shifting from addressing needs to identify local assets for endogenous growth; (iv) building institutional capacity at sub-national level and increase civil society participation; and (v) improving monitoring and evaluation.

*Source: OECD, 2013*

distributed. This convergence process is clearly happening in Brazil but will take time (OECD, 2013). The existing metropolitan framework in Brazil has attempted to deal with these differences and promote growth. The new Estatuto da Metropole revisits some of the above questions and suggests a way forward toward better spatial integration in rapidly growing urban places.

**6. In this process of spatial change and inclusion, what role has metropolitan governance played in Brazil?** Would inequality and access to basic services be improved with a more aggressive metropolitan collaboration? What can be learned from metropolitan governance in Brazil and elsewhere?

**7. This report is a contribution to the above discussion.** Drawing from literature and data from Brazil, it reviews the main concepts related to metropolitan governance, presents examples, and discusses some ideas relevant to the Brazilian case. The objectives are to take stock of the alternatives currently in place, summarize the ongoing discussion about their effective-

ness, and based on national and international experiences, identify some factors that could improve the collaborative framework across tiers of public decision-making.

**8. The audience includes policy makers and scholars interested in metropolitan governance in general and in Brazil in particular.** While metropolitan governance should remain flexible to adapt to the changes in economic activity and urban concentration, some basic guidelines are helpful to guide the ongoing revision of metropolitan legislation and to foster some consensus on such issues as the relation between metropolitan areas and local governments, funding for metropolitan areas, and ways to improve the vertical coordination using metropolitan regions as an effective instrument.

**9. The report is organized in seven parts:**

**1) Analytical Framework,** reviews the analytical framework for metropolitan governance – drawing from Bahl et al. (2013) and

### Box 2. Why metropolitan governance?

The need for collaborative policies at spatial level is anchored in the foundations of economic geography. Accepting the inevitability of urbanization for countries to grow – as density is the prerequisite for the economic transformation to industrialization - the World Bank's World Development Report 2009 argues that governments may be concerned about the disparities in income and welfare as production concentrates in selected places. The solution would be "to promote economic integration to reduce those disparities" (World Bank, 2009). Such integration requires institutions and regulations to provide basic services and certainty to all; infrastructure to ensure spatial connectivity and enable people to move and access labor markets, education and cultural facilities) and spatially targeted interventions, such as slum upgrading and incentives to innovation. Such interventions will enable the convergence of living conditions across the space, so that everyone can take advantage of the benefits of urbanization.

*Source: World Development Report: Reshaping Economic Geography, 2009.*



Slack (2007) – and discusses the criteria that helps associate metropolitan forms of management to particular urban management objectives, such as efficiency, redistribution and accountability in the provision of urban services.

**2) The Brazilian Case: Characteristics and Evolution**, reviews the evolution of metropolitan governance in Brazil drawing from a voluminous literature produced by Brazilian think tanks and international institutions.

**3) Economic and Spatial Dynamics of Selected Metropolitan Areas**, presents an overview of the spatial developments in Brazil, and the picture of unequal service provision and income levels.

**4) Selected Metropolitan Experiences**, describes the characteristics of three selected metropolitan regions: São Paulo, Recife and Belo Horizonte.

**5) Financing**, summarizes issues of Metropolitan financing.

**6) Recent Developments, The New Statute of the Metropolis**, discusses the new Statute of the Metropolis (enacted in January 12, 2015).

**7) Final Observations**, closes the report with some final remarks.





## PART 1. ANALYTICAL FRAMEWORK

**10. Large metropolitan areas have clear advantages in terms of economies of scale, agglomeration economies and attraction for private investment.** They also draw people looking for better jobs and living conditions. Demand for housing, infrastructure and social services in these areas may become too great too soon, and without a rapid response, congestion, pollution and social problems may erode the benefits of the large economic area. The existence of slums and other places without access to basic services is the proof that urbanization may get out of hand at least until the governments can fill the gap (Bahl, Linn and Wetzel, 2013).

**11. The choice of a particular metropolitan model depends on the type and size of the government, as well as the criteria considered important for service delivery.** Both Slack (2007) and Bahl et al (2013) emphasize three criteria: efficiency, equity, and accountability. Efficiency deals with the capacity of the government to provide public services at the lowest cost and with potential to internalize externalities. Equity relates with the possibility to provide services to lower income constituencies via cross-subsidization or targeted transfers. Accountability refers to the proximity of taxpayers to the government. Correspondence between expenditure decisions and revenues collection is also required to ensure accountability.

**12. The challenge when defining a metropolitan governance structure is to find the balance between economic efficiency, equity and accountability (Bahl et al, 2013).** The first two criteria – efficiency and equity – are served better by large government units. These allow for economies of scale, provide a larger tax basis, and

enable higher tiers of the government to play a redistributive function using transfers based on needs and fiscal capacity. Accountability is best served by having many local governments (home rule), as small governments are easier to control by the taxpayers. Eventually, the best governance model will be chosen according to the criteria that countries value the most, including the independence of local governments or home rule, a fundamental piece in the Brazilian case.

**13. For discussion purposes let us consider five types of metropolitan governance models (Bahl et al, 2013).** Annex 1 contains a detailed explanation of the pros and cons of the models and examples.

- (a) **Jurisdictional Fragmentation** (or fragmented one-tier model) occurs when small governments provide all services. It is the most frequent model for managing metropolitan areas, especially when local autonomy and home rule are important principles for the local authorities. It is found in Brazil, Europe, United States, Switzerland, Canada, India and other countries (Slack and Chattopadhyay, 2013). Local authorities are responsible for the provision of services, have tax powers and financial autonomy. Central and state governments intervene to ensure quality and social policies, monitor overall development policies and enforce the provision of global goods such as safety and environment.

(b) **Amalgamation** (or one tier consolidated) happens when higher levels of government (in general provinces or states) have decided to merge more than one low tier of government for purposes of efficiency or redistribution – sharing financing across the local governments permits cross subsidization across jurisdictions with different tax base. A well-known case of amalgamation is the City of Toronto, now made of 14 districts amalgamated in two phases with the objective to reduce administrative costs. Cape Town District is also the result of the amalgamation. The objective was to promote the inclusion of low-income areas separated according to racial divide since the time of the Apartheid. The boundaries of the City of Madrid were formed by amalgamation too; between 1948 and 1954, the city integrated 13 municipalities of its periphery. Amalgamation would be difficult in Brazil. Brazilian local governments value their status of federal entities and may resist against the idea of giving up part of the home rule to be part of a wider metropolitan structure.

(c) **Two-tier Government Model**, includes an upper tier body (district or metropolitan area) that provides services characterized by economies of scale and externalities (transportation, land use planning and solid waste disposal), while low tier local governments take care of the local goods such as local parks or firefighting. Redistribution is achieved at the upper level by means of

a combination of tax and spending policies. On the financing side, tax rates are generally levied at uniform rates across the region and the contribution of the lower tier to the upper tier depends on the size of the tax base. The larger the tax base, the larger is its contribution to the upper tier (Slack, 2007). Madrid Metropolitan Area (see Box 4), Greater London Authority and Greater Toronto Authority are examples of two-tier metro models. It is unclear whether this alternative would ever work for Brazil, but it could be one of the alternatives for the medium-term.

(d) **Special Purposes Agencies** are formed to deliver services that spill over municipal boundaries in a metropolitan area. This form of cooperation is used in countries with a history of strong and autonomous local government. In the US, for example, one third of local governments have *special districts or school districts* providing education, transportation, water and waste management. The boards of the special districts are responsible for the management of these services as well as taxing and price setting. Separate districts can be established such as a region-wide transit district or hospital district, ensuring that professionals without political influence and with more professional expertise do the delivery of services. Dedicated revenues from user fees can be used to finance capital expenditures (Bahl and Linn 1992). In Brazil, many states use special purpose agencies to provide

water services, sanitation, transport and planning services.

- (e) **Voluntary Cooperation** among local governments is a popular alternative. It involves “minimal” government restructuring when city governments feel the need to enter into agreements with other cities. Voluntary cooperation takes the form of consortia (Brazil), urban communities (France, see Box 3), inter-municipal authorities (Spain and Belgium), and core cities (the Netherlands). These bodies can levy taxes, user charges and/or collect contributions from the municipalities. This type of voluntary cooperation is in general encouraged by fiscal incentives from state and federal governments. In the US, for many years local gover-

nements had to show approval of the needs and solutions in a regional plan by a regional entity, as a pre-requisite for obtaining grant funding from the federal government for road and transport infrastructure and wastewater treatment. In the Netherlands and in the EU, regional development councils (association of municipalities) were created as a requirement to access the EU development grants. In Brazil, thousands of consortia have been signed since the consortia law was approved in 2005 (Abrucio et al, 2011 and Arretche, 2013).

### Box 3. Urban Community of Marseille

In France, nearly all-urban areas have been administered by urban communities (OECD 2006). The best-known case is the Urban Community of Large Marseille. It began in 1992 with three municipalities – Marseille, Marignane and Saint-Victoret – that created a public corporation (the *Communauté de Communes Marseille Provence Métropole*) focused on roads and traffic. Five years later, 17 other cities had joined, leading to the creation of the Urban Community of Marseille in 2000. It is a metropolitan organization with responsibility over regional economic development, transportation, land use and housing, crime prevention, waste disposal and environmental policies. The member localities have adopted tax-sharing agreements whereby the *Communaute Urbaine* collects a common tax on business, thereby eliminating tax competition among the local municipalities.

*Source: Slack (2007)*

#### Box 4. Two-tier model - Madrid

The metropolitan region of Madrid was created in 1983, taking over the province of Madrid. It includes an upper government (Comunidad Autónoma de Madrid, CAM) and 179 municipalities. More than half of the population is concentrated in the City of Madrid (3.2 million people).

The CAM is responsible for global tasks such as spatial planning, housing, and economic development. It shares responsibilities with the central government for health, education and environmental protection. The largest spending item is health followed by education, and the largest source of revenues is the personal income tax followed by the value added tax (shared with the central government).

The City of Madrid takes care of traffic, streets maintenance, public lighting, and solid waste management. Housing policy and spatial planning, among others, are shared tasks with CAM. The City's largest spending item is in the areas of environment and mobility. The Property Tax, the Land Value Increase Tax and the central government transfers are the main sources of revenues.

CAM collaborates with the municipalities in several ways: shares information, helps mediate disputes, helps with contractual arrangements for the delivery of public services, and establishes cooperation funds to promote social services and employment. There are also special purposes agencies that deliver services in transport, water and land. Some examples are:

- **Madrid Regional Transportation Consortium** (Consorcio Regional de Transportes de Madrid, CRTM). Created in 1986, CRTM coordinates the public transportation systems, including the subway, the Municipal Transport Company, the suburban rail and buses, and the light rail. It manages the delivery system, sets fares and ensures a sustainable financial framework. It operates with great autonomy from the CAM, bringing together public and private transport services providers.
- **Canal de Isabel II Gestion SA**, was created in 2008 to manage the water sector. It oversees water production, wastewater treatment, and conservation of rivers. The CAM and 111 regional municipalities are the company's shareholders. It is the succession of a former entity – Canal Isabel II created in 1851– that is now the official holder of the concessions, provides authorizations and defines the service planning.
- **Arpegio**. It is a company owned by the CAM, responsible for land management. Its activity is complementary to the private sector, putting on the market land at affordable prices.

A voluntary horizontal cooperation agreement widely used in Madrid is the Mancomunidad, to which municipalities delegate some functions, such as the provision of public services or the promotion of economic development. It is a very flexible instrument that allows incorporating new objectives with time.

In addition, the region has been able to develop strong linkages with the social and economic groups, including trade unions and business associations, thanks to their participation in regional entities and consultation bodies.

Some authors argue that Madrid's metropolitan model is one of the most accomplished in Europe. The two-tier government system has allowed the CAM and the municipalities to provide efficient delivery of public services and promote the development of the metropolitan region. Nevertheless, there are conflicting interests between CAM and the City of Madrid in terms of overlapping responsibilities and uncoordinated initiatives.

*Source: OECD Territorial Review Madrid 2007*



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## PART 2. THE BRAZILIAN CASE: CHARACTERISTICS AND EVOLUTION

**14. According to the definition of the Statute of the Metropolis, a metropolitan region is an urban agglomeration that constitutes a metropolis, an “urban space with territorial continuity, that given its population and political and socioeconomic relevance, has national influence or influence over a region that, at minimum, constitutes the area of influence of a regional capital, according to the criteria defined by the IBGE”.** According to the 2010 Census, Brazil has 36 MRs and 3 Integrated Development Regions (RIDE). Together, they account for almost half of the country’s population (IBGE, 2010), about 60 percent of its GDP (IBGE, 2012), and most of its economic and urban growth. MRs have been defined to help collaboration in regional policies. Out of these areas, 15<sup>7</sup> are considered functional and integrated following the OECD concept of metropolitan regions<sup>8</sup>.

**15. The 1968 Constitution authorized the federal government to establish MRs, which were supposed to develop long-term plans and be run by secretariats.** They were seen as an important tool to execute investment projects in infrastructure, transport, housing and sanitation. Financial resources were channeled from the National Pension Fund (Fundo de Garantia por Tempo de Serviço, FGTS) through the National Housing Bank (BNH) and the National Department of Highways (DNER). Funding was conditional to the preparation of integrated metropolitan development plans (Azevedo and Mares-Guia, 2004).

7. The MRs are: Belem, Distrito Federal, Belo Horizonte, Campinas, Curitiba, Florianópolis, Fortaleza, Goiana, Manaus, Porto Alegre, Recife, Rio de Janeiro, Salvador, São Paulo, Vitória.

8. OECD methodology describes urban areas as “functional economic units,” overcoming the constraints tied to administrative boundaries and enhancing the capacity for comparison across regions and countries. Because data on urban areas are generally disaggregated according to administrative boundaries, urban areas or metropolitan regions, as they are referred to in this paper, are defined as aggregations of these administrative units (municipalities). Redefining “Urban”: A New Way to Measure Metropolitan Areas, OECD Publishing, 2012.

**16. Coordination at the metropolitan level for land use, transport and housing was limited.**

The dimension of the future urban growth was difficult to predict and negative attitudes towards new migrants were the norm as illustrated by the destruction of slums and forced removal of slum dwellers from the slums (World Bank, 2006, 2011). The speed at which urbanization occurred between 1970 and 1990 was coincident with financial crisis, economic decline, and a shift of governance authority over urban matters to the states.

**17. The 1988 Constitution changed the nature of the metropolitan governance in Brazil.** First, the power to create metropolitan regions was transferred from the central government to states. States were given the power to establish “metropolitan regions formed by adjacent municipalities in order to integrate the organization, the planning and the operation of public functions of common interest” (Article 25). Up to 2012, 44 new MRs were created by the states, in addition to the nine MRs created by the federal government in 1973 (Arretche, 2013). On the other hand, the 1988 Constitution gave local governments the full status of federal entities. As a result, mayors can challenge state policy initiatives and states need the municipal agreement to be included in a particular metropolitan body. Some argue that this situation weakens the capacity of the metropolitan areas to effectively coordinate the base and bridge the central policies with the local implementation (Wetzal, 2013).

**18. The new millennium brought a new vigor to the metropolitan debate in Brazil.** After being elected, President Lula enacted legislation that impacted urban issues – the so called City Statute<sup>9</sup>, which strengthened, through a number of instruments, local governments' authority over land use. In 2003, the Ministry of Cities was created. In 2005, the Law of Public Consortia was enacted<sup>10</sup>. In 2007, the Committee for Federal Articulation (Comitê de Articulação Federativa, CAF) was created within the President's Office with the purpose of promoting better coordination for the planning and implementation of strategies between the central and municipal governments. The National Housing Program (Programa Minha Casa Minha Vida, PMCMV) was launched in 2009 to improve access to affordable housing. The program represented years of dialogue and efforts to consolidate the interventions of government levels, private sector and the beneficiaries themselves.

**19. Brazil has good examples of horizontal collaboration across municipalities and some success in vertical coordination (e.g. Belo Horizonte).** Metropolitan forms vary according to the economic context and the needs of the lower tiers of governments (Arretche, 2013). In the Greater ABC Region<sup>11</sup>, the need was to manage water resources and cope with the aftermath of the collapse of the automobile industry and its impact in job creation and social welfare. In the São Paulo Metropolitan Area, improving transit is probably the core challenge faced by authorities, followed by the challenge of providing services to a very large population (more than 19 million) and trying to bridge the gap that still divides the population of the core city from those in the periphery in terms of income and wellbeing. Since the Law of Public Consortia was approved in 2005, more than 19,000 voluntary agreements have been signed (see Ta-

ble 2). The largest part have been targeted to help cities implement joint programs in health and education. Some are paradigmatic, like the Consortium of the Greater ABC Region in São Paulo, a true consortium that was created from the bottom up and led by mayors and civil society trying to produce a sustainable solution for a region in crisis.

**20. A new framework for metropolitan governance – known as the Statute of the Metropolis – was enacted in January 2015 (Law No. 13.089/2015).** It includes principles to facilitate the formal collaboration and constitution of metropolitan regions in Brazil. It also provides general guidelines for the planning, management and implementation of so-called public interest functions in metropolitan regions and urban agglomerations created by states. Moreover, (i) it gives general norms for the integrated urban development plans that are to be developed in formally constituted MRs; (ii) it incentivizes the use of existing collaboration instruments; (iii) it sets general guidelines and criteria for inter-federative governance – to be further regulated through specific and complementary state laws (see Part 6 for more details).

## THE BRAZILIAN ANGLE

**21. Tension between state governments (that have the power over metro governments) and municipalities (who are autonomous entities), lack of resources and continuing regional inequalities have increased the complexity of metropolitan governance in Brazil.** A particular concern is that getting municipal adherence to policies and getting local legislative chamber approval is not easy and often requires "fine-grained strategies" (Arretche, 2013, page 57). This raises the question of the value of imposing state policies (that are accepted reluctantly by

9. Law no. 10.257, July 2001, known as Estatuto da Cidade.

10. Law no. 11.107, April 2005.

11. Currently refers to seven cities in the state of São Paulo: Santo André, São Bernardo, São Caetano, Diadema, Mauá, Ribeirão Pires, Rio Grande da Serra, but originally referred only to three smaller cities south of São Paulo: Santo André, São Bernardo do Campo, and São Caetano do Sul.



the lower tiers) compared with the efficiency of collaborative approaches based on agreed frameworks and consensual objectives.

**22. Indeed, the Constitutional arrangement in Brazil precludes the application of some of the governance models described in Part 1.** For example, the two-tier model that would seem the one that best combines local autonomy with upper-level redistribution function is not realistic in the short run. At present there are no independent upper-tier metropolitan level bodies (States act as such for national policies) and it is unlikely to change since it would require new funding, a sensitive matter at present (Rezende, 2011). New taxes are strongly resisted in Brazil and further use of municipal and state

funds for metropolitan objectives would add to the already high portion of revenues allocated to education and health. The practices found in other countries of compulsory participation of municipalities in new metropolitan structures would not be possible in the short run. Amalgamation or annexation seems to be politically costly since it would require the agreement of municipalities and this would be unlikely. Finally, both states and the federal government may see the existence of another layer of government as a fourth power that would raise problems and competition for funds and for power (Arretche, 2011).

**23. In these circumstances, the provision of services on a metropolitan scale in Brazil tends**

**to either be the outcome of inter-municipal cooperation or upper-level (federal or state) policy decisions as is the case in education and health.** In the short-run, the alternative is to promote the mechanisms that render municipal collaboration possible. The cases of Belo Horizonte Metro governance and the Greater ABC Region, analyzed in Part 4, show interesting examples. In the first case, the state government was the main leader of the collaboration; in the second case, collaboration happened without any upper-level leadership.

## THE ROLE OF THE FEDERAL GOVERNMENT

**24. While the power to create MRs has remained at the state governments mandates, the central government has been quite active in this area.** First, the creation of the Ministry of Cities focused the political attention on the questions of land use in the urban space and the issue of millions living in slums. Second, the approval of the Law of Public Consortia provided a status to the consortia so that they could borrow and offer guarantees on their own (Klink 2008). Third, the CAF provided an independent forum of discussion. A working group under CAF was formed in 2007 to develop proposals to improve the management of metropolitan regions and

coordinate public policies. State representatives are now part of the new CAF. Finally, the Statute of the Metropolis also reaffirmed that cooperation among states and municipalities towards integrated urban development will be supported by the central.

## THE ROLE OF THE STATES

**25. As of 2011, twenty-four states had constitutional articles on the creation of metropolitan bodies.** Many of them deal with the criteria for their creation and the representation of the municipalities and civil society. However, the status of municipalities as full members of the Brazilian Federation is seen as an impediment for states to deal with metropolitan issues (Arretche, 2011). Getting municipalities to join a given legislation adds actors to the decision process and often requires special incentives for municipalities to agree to participate. This situation explains the reluctance of state governments to create metropolitan bodies for they may end up being another layer of contention and competition for resources and not really bridging policy making at state and federal level with local authorities.

### Box 5. The role of the central government in other countries

Other countries depict similar interest of the central government towards cities and metropolitan areas. Switzerland has approved a constitutional amendment allowing the federal government to intervene in cities and metropolitan issues. New coordination structures have been created including a Tripartite Agglomeration Conference, and policies have been designed to help urgent projects to improve metropolitan public transport, railway, and projects in city neighborhoods to advance the quality of life of the residents. In Australia, India and South Africa similar initiatives show the interest of the central government to promote inter-municipal co-operation. In the United States and Canada, the federal government has no formal role in local government and the only intervention in metropolitan issues is through financing assistance to fund infrastructure (Slack and Chattopadhyay, 2013).

Table 1. Metropolitan Agencies in Brazil 23 Metropolitan Regions (2013)

METROPOLITAN INSTITUTIONS	MRS	OBSERVATIONS
Metropolitan Council	23	All except Salvador. It is the executive body of the MR
Metropolitan Fund	6	Belem, Belo Horizonte, Recife, Maceio, Steel Valley (MG), Greater Victoria
Metropolitan Agency	4	Steel Valley, Campinas, Santos and BH
Companies		Salvador – Conder Recife – FIDEM São Paulo – EMPLASA
Metropolitan parliament	2	Natal and Maringá

Source: Ribeiro e Santos Junior (2010, p 62-64)

**26. As direct managers of MRs, state governments could use metropolitan agencies to promote collaboration, innovation and effective policy changes at metropolitan level.** However, many states seem to neglect this potential (Gouvea, 2005). Most state constitutions include a reference to metropolitan regions but without details or objectives. In some cases, the administrative boundaries of the MRs do not meet the criteria of density and linkages between the core city and the other municipalities. States also face the lack of interest of member cities. Looking at the five typical institutions in a metropolitan government in Brazil – Metropolitan Council, Metropolitan Fund, Metropolitan Agency, Metropolitan Parliament and Companies<sup>12</sup> – Ribeiro and Santos Junior (2010) find a great variation across states (see Table 1), although all agencies had a metropolitan council in charge

of executive functions. Recent efforts from the State Government of Rio de Janeiro to develop an institutional model for metropolitan governance are worth notice. Through the Decree N. 44.905, dated August 11, 2014, the Metropolitan Chamber for Governmental Integration (*Câmara Metropolitana de Integração Governamental do Rio de Janeiro*) and the Executive Group for Metropolitan Management (*Grupo Executivo de Gestão Metropolitana*) were created. The first has deliberative power, and is composed by the Mayors of each municipality within the MR and chaired by the State Governor. Its main role is to collectively collaborate for metropolitan public policy formulation, including the development of an institutional governance model and integrated planning system. According to the proposed model, the Executive Group will hold attributions similar to those of a Metropolitan Agency.

12. The Metropolitan Council is the most important agency. It includes the cities' Mayors and state representatives. The Metropolitan Fund includes resources up to BR\$ 3 million and finances analysis and studies. The Metropolitan Agency is created to focus on a particular project and get civic participation. Companies are special purpose agencies that serve the metropolitan area with a specific mandate, mostly for planning. The Metropolitan Parliament is supposed to approve laws within the metropolitan area.

Table 2. Number of Municipalities included in Consortia established by 2011

SECTORS	INTER MUNICIPALITIES	WITH STATES	WITH FEDERAL GOVERNMENT	WITH PRIVATE SECTOR	TOTAL
Health	1.906	1.167	558	588	4.219
Social Security	222	867	660	558	2.307
Education	248	1.116	767	571	2.702
Culture	161	385	206	213	965
Tourism	351	275	138	151	915
Child assistance	149	513	321	287	1.270
Urban Development	255	420	247	105	1.027
Transport	295	428	207	129	1.059
Housing	106	720	428	159	1.413
Jobs/Employment	114	358	164	216	852
Sanitation and waste management	343	387	231	144	1.105
Environment	387	467	225	191	1.270
<b>Total</b>	<b>4.537</b>	<b>7.103</b>	<b>4.152</b>	<b>3.312</b>	<b>19.104</b>

Source: Abrucio, Sano and Sydow (2011)

## INTER-MUNICIPAL CO-OPERATION

**27. The Law on Public Consortia (2005) recognized the capacity of the municipalities to choose their partners for association and conferred a legal status to these agreements, granting them the capacity to receive funds, borrow and extend guarantees.** Consortia were authorized to carry project work, planning, implementation, and regulation. The national Framework Laws on Solid Waste (2010<sup>13</sup>) and Basic Sanitation (2007<sup>14</sup>) explicitly refer to instruments of collaborative and shared governance such as public consortia. Table 2 depicts the number of

municipalities included in consortia negotiated among municipalities and with states, federal government and private sector entities. Health is the sector with largest number of agreements, as states and the federal government encouraged consortia among local governments to speed the implementation of the National Health System (SUS). Other municipal agreements have been promoted by the federal government. This is the case of the consortia for Food Security and Local Development. At the moment, there are 40 consortia in the 26 states including 580 municipalities and representing 11 million inhabitants.

13. Law no. 12.305, August 2010.

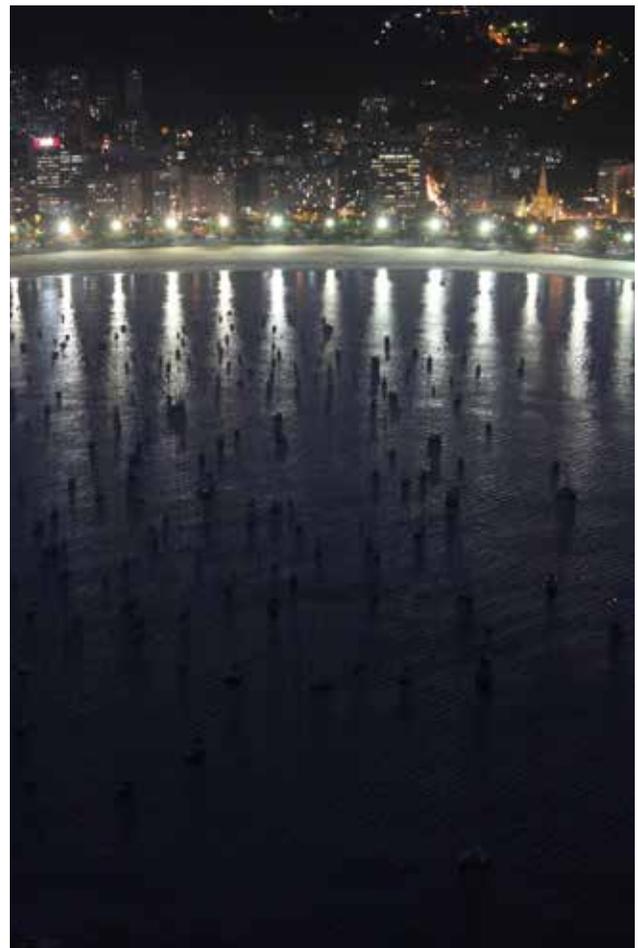
14. Law no. 11.445, January 2007.

**28. State governments have participated in voluntary arrangements, especially in the education and health sectors.** In the state of Pará, the Secretary of Regional Integration is part of the consortia in water, health, sanitation, solid waste, safety, mobility and environment. In 2011, 12 consortia with state participation had been signed (Abrucio et al, 2011). In Ceara, the state government, through Secretariat of Cities, is supporting the implementation of a World Bank financed program in the South of the state (Cariri region). The program supports key economic clusters – the tourism sector being one of them – , including investments in general urban upgrading of the city centers. It also aims at strengthening coordination and improving institutional capacity of the 9 municipalities to collectively handle aspects, such as solid waste. Similarly, the state of Mato Grosso together with the Municipal Association of the state has established 15 consortia in agro-industry and family agriculture businesses.

**29. There are also inter-state consortia.** One example of state association is the consortium between Ceará, Piauí and Maranhão, that led to the creation of the Sustainable Regional Development Agency to help implement tourism projects in 19 cities between Barreirinhas (MA) and Acarajú (CE) – called the Emotions Route – in addition to some training institutions on tourism and hospitality. The Health Pernambuco-Bahia consortium was created in 2009 to manage the Emergency Care of the Hospital in Petrolina. In 2008, Sergipe and Alagoas began talking about formalizing consortia to promote the development of the region of the low São Francisco Valley and six working groups have been created to jointly prepare this integrated region plan. There are also tri-partite consortia between municipalities, states and the federal government. For example, by 2011 the Ministry

of Environment had organized 16 in solid waste collection and disposal (Abrucio et al, 2011).

**30. Similar arrangements exist with the private sector, notably in health, education, assistance and social development.** The Consortium of the ABC Region was the first case to show the benefits of coordination to discuss questions of economic development and restructuring. At present, the cases of Belo Horizonte and Recife animate the debate (described in Part 4). These experiences, particularly that of the Greater ABC Region, helped to create from the end of the 1990s a coalition in support of the territorial associations in which metropolitan management is a central question.



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## PART 3. ECONOMIC AND SPATIAL DYNAMICS OF SELECTED METROPOLITAN AREAS

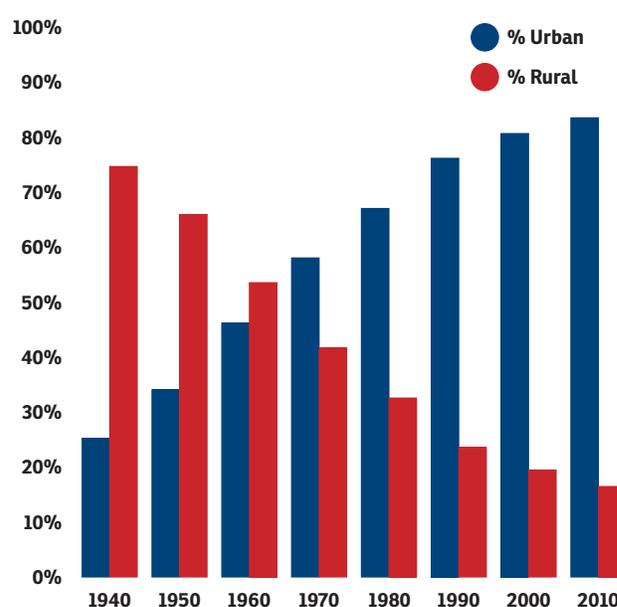
**31. This section describes general trends on economic, demographic and social conditions of the selected MRs in Brazil.** The analysis uses data collected through the 2010 and 2000 Population Census, formal employment data from the Ministério do Trabalho e Emprego, or MTE, and information available in the Brazilian relevant literature and official reports. Detailed information on three selected MRs – São Paulo, Belo Horizonte and Recife – are provided in Part 4. These three MRs were chosen for the size of their economy and the relevance of their metropolitan experience.

**32. Brazil has undergone massive urbanization in the last 80 years (see Figure 1), leading to the emergence of a number of MRs.** This process, known as *metropolização* in Portuguese, involves the expansion beyond the jurisdictional boundaries of a core municipality to incorporate surrounding municipalities, forming metropolitan urban agglomerations linked together by economic and residential commuting patterns. This section describes the main developments of Brazilian Metropolitan sector using the 15 urban agglomerations categorized by the Observatório das Metrôpoles (2005) using criteria comparable to OECD methodology. Figure 2 shows a map of the selected MRs (Belém, Distrito Federal, Belo Horizonte, Campinas, Curitiba, Florianópolis, Fortaleza, Goiânia, Manaus, Porto Alegre, Recife, Rio de Janeiro, Salvador, São Paulo e Vitória).

**33. In 1960, Brazilian MRs represented 21 percent of the country's population (15 million), and this share grew to 25 percent in 1980, 45 percent in 2000, and 60 percent today.** MRs

represent 60 percent of the national income, 80 percent of the headquarters of major enterprises, 70 percent of municipal taxes, 46 percent of municipal revenues and 42 percent of municipal investments (Rezende, 2011). MRs have grown more rapidly than the rest of the country, both in population and in GDP terms. The fastest growing regions have been Fortaleza, Salvador and Curitiba (with average annual growth rates above 3 percent) mainly due to the influx of people in the periphery (at 3 percent compared with 1.37 percent in the core). As expected, the large capitals of São Paulo and Rio de Janeiro have grown slower – 1.85 and 1 percent respectively (see Table A2- 3, Annex 2).

Figure 1. Share of urban and rural population in Brazil



Source: IBGE (2010) and own elaboration.

Figure 2. Selected MRs of Brazil<sup>15</sup>



Source: IBGE (2010) and own elaboration.

**34. The renewed economic growth during the period 2000-2010 – an average GDP growth of 6 percent a year – was felt in major metropolitan areas, as they have been engines of economic growth.** Economic activity attracted further population. Figure 3 shows how population growth related to GDP growth in the 15 metropolitan areas chosen for this analysis. By 2010, half of the Brazilian poor and 90 percent of the people living in subnormal conditions<sup>16</sup> were found in metropolitan cities<sup>17</sup>. Socio-spatial dis-

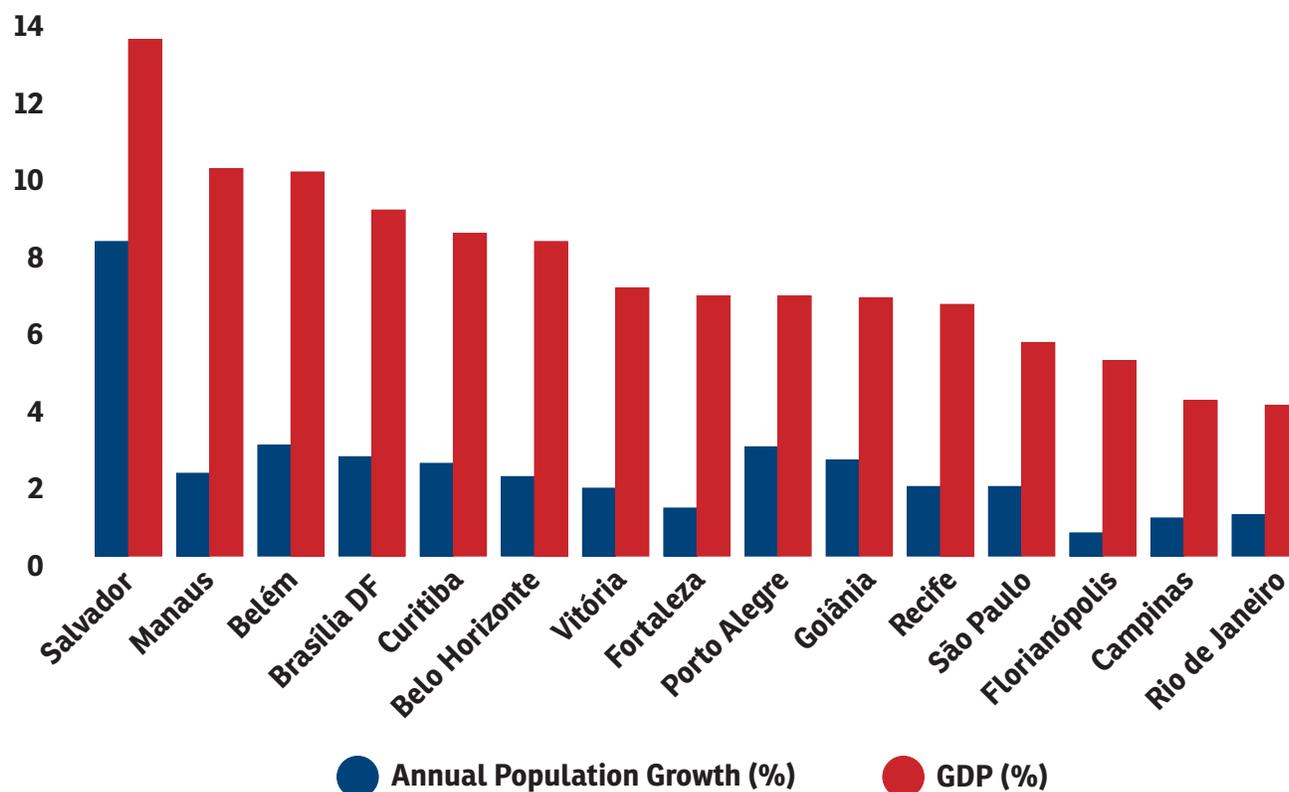
parities persisted, both in terms of income and access to basic services. As it often happens, local governments lag in their response to the demand for basic services associated with the influx of population in the core and periphery.

15. Table A2- 1 in Annex 2 shows the population for the 15 selected MRs.

16. Subnormal conditions or slums are defined as situations where households do not have land title, they lack access to water and sanitation, experience overcrowding, and use temporary materials to build their shelter.

17. Based on IBGE, 2010.

Figure 3. GDP and Population Growth, Metropolitan Regions, 2000-2010



Source: IBGE (2000, 2010) (see Table A2- 1 and Table A2- 3 Annex 2)

**35. These 15 metropolitan areas represent more than one-third of the total Brazilian population and all experienced population growth during 2000–2010.** The Center-West region registered the most dramatic changes, with Brasília RIDE DF (Região Integrada de Desenvolvimento do Distrito Federal e Entorno) nearly doubling in population, and Goiânia growing at almost 25 percent. Manaus, Fortaleza, Belo Horizonte and Florianopolis also registered growth higher than 20 percent. Most of the demographic growth followed the improvement in economic conditions and employment. São Paulo and Rio de Janeiro continue to be the largest MRs in terms of production and population, contribut-

ing to the hegemony of the Southeastern Region in terms of population and economy.

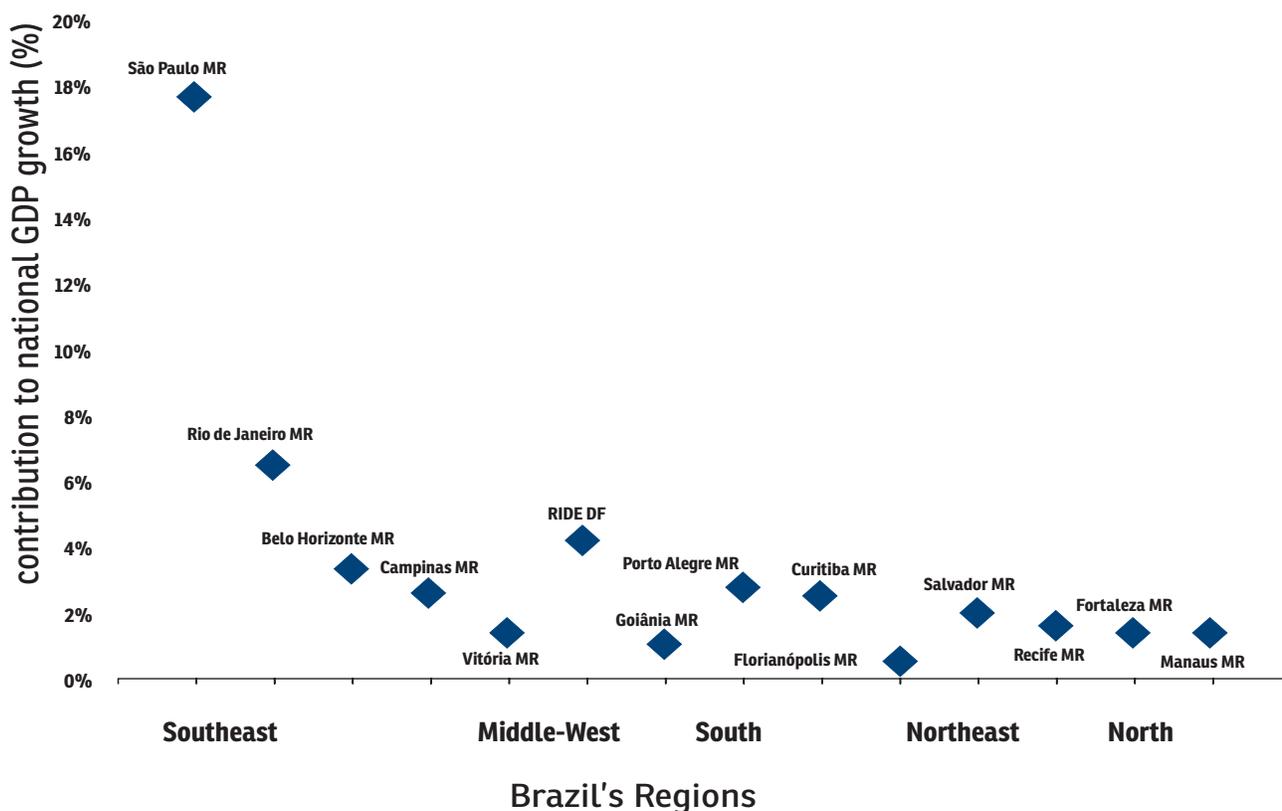
**36. More than half the population of these MRs typically lives in the capital city, 80 percent being concentrated in few large centers in most cases.** Outliers in this trend are Porto Alegre and Campinas, having only one-third of the total MR population. This denotes a pattern of population distribution where small cities provide residence to a large population commuting to the core center (see Table A2- 2, Annex 2).

37. The selected 15 MRs represent a little more than half of the national GDP, their share having slightly declined during 2000–2010 from 54 to 51 percent, probably due to the relative increase of the remaining regions. A large share of Brazil’s population and GDP remains concentrated within the Southeastern Region of the country where the most populous (and richest) cities, São Paulo and Rio de Janeiro, are located. São Paulo region contributed to 18 percent of the nation GDP growth during the ten-year period (Figure 4), followed by Rio de Janeiro with about 7 percent contribution. The contribution of the North and Northeast was smaller in line with the relative size of their economy.



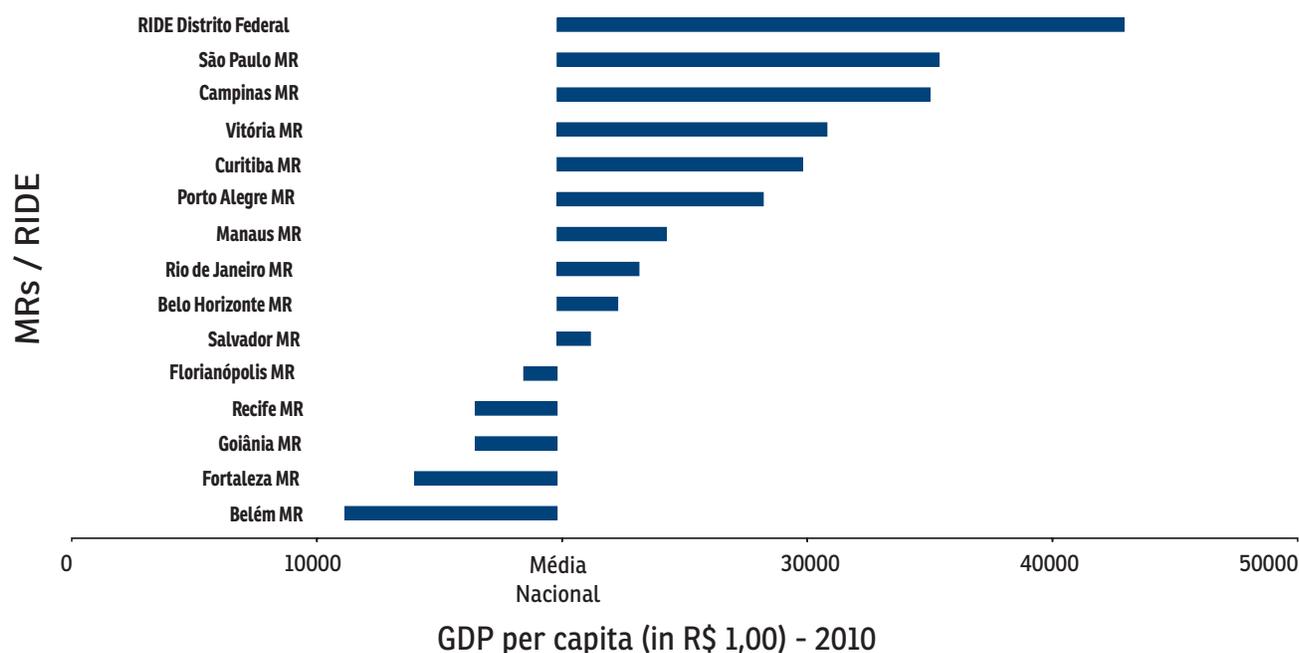
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Figure 4. Ranking of Brazilian MRs by contribution to national GDP growth, 2000–2010



Source: IBGE (2000, 2010).

Figure 5. Ranking of MRs by 2010 income: GDP per capita in MRs/RIDE vs. average for Brazil



Source: IBGE, 2010.

**38. In 2010, per capita GDP was often higher in MRs than in the rest of the country.** Ten out of the 15 MRs in this study outperform the national average of GDP per capita in 2010, with Brasília, followed by São Paulo and Campinas as the top three (see Figure 5). Belém, Recife and Fortaleza, Goiânia and Florianópolis, lagged behind in terms of per capita GDP.

**39. While nominal per capita income grew well above 10 percent a year, and real growth ranged between 3 and 7 percent<sup>18</sup>, income and wage levels grew slower, with the exception of Salvador, Fortaleza, Rio de Janeiro and Goiânia which performed better than the average<sup>19</sup>.** A more detailed analysis would be needed to understand whether there has been a substitution of labor for capital in the overall metro system or whether the lower levels of income and wages earned may be weighting in the average growth rates.

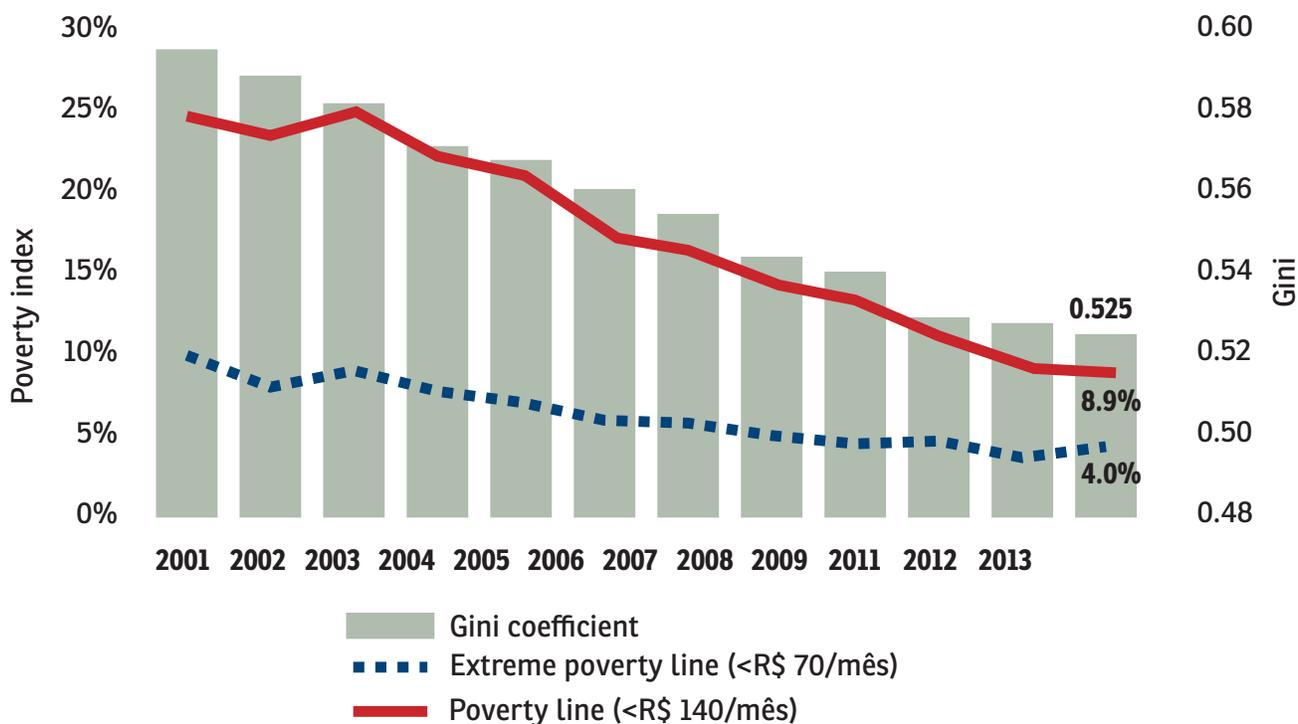
**40. In terms of concentration of highly paid jobs, the core cities concentrate a higher share of people earning more than 10 minimum wages<sup>20</sup> and with higher education degrees.** The difference is especially high in the Southern and Central-West Regions where the demand for high skilled manpower may be higher. This result was confirmed by similar analysis carried out by the Ministry of Cities and Cities Alliance (2010), confirming that core cities are richer and earning gaps are larger between the core and the rest of the MR. In poorer MRs, the gap between the highest and lowest wage earners is more narrow (OECD, 2013).

18. In line with IBGE estimates for the extended consumer price index (IPCA).

19. The State of the City report shows a similar result (POLIS et al., 2012).

20. Based on IBGE Census data on monthly nominal income in 2010.

Figure 6. Poverty and income distribution indicators in Brazil (2001-2013)



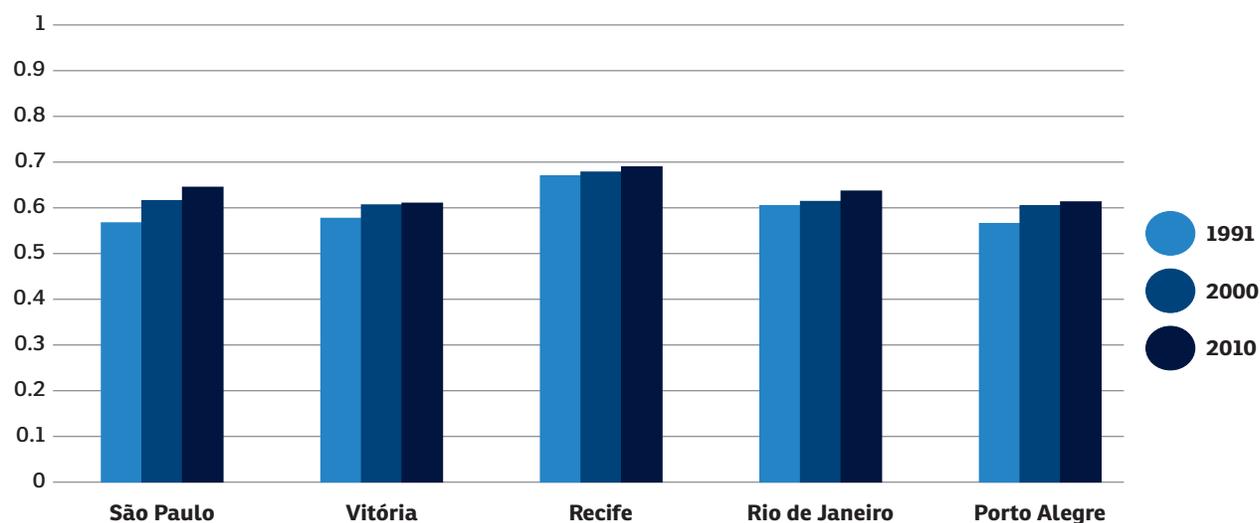
Source: PNAD (2013)

41. While inequalities have decreased within all but one macro-region (Center-West) and in most of the states (OECD, 2013), the 15 MRs show increased differences in income. Based on Census data from 2000 and 2010, Gini coefficient values estimated for the core cities of São Paulo, Vitória, Recife, Rio de Janeiro and Porto Alegre demonstrate a consistent increase in income inequality during 2000-2010 (Figure 7). Some improvement was observed in Campinas, Manaus, Brasília, Goiânia, Belém and Curitiba (Figure 8), but they have not been enough to compensate for the exacerbation of income inequality that occurred in the 1990s. While we believe that this trend is part of the convergence process being seen in most of the Brazilian regions (OECD, 2013), the Southern municipalities may be lagging in terms of income convergence



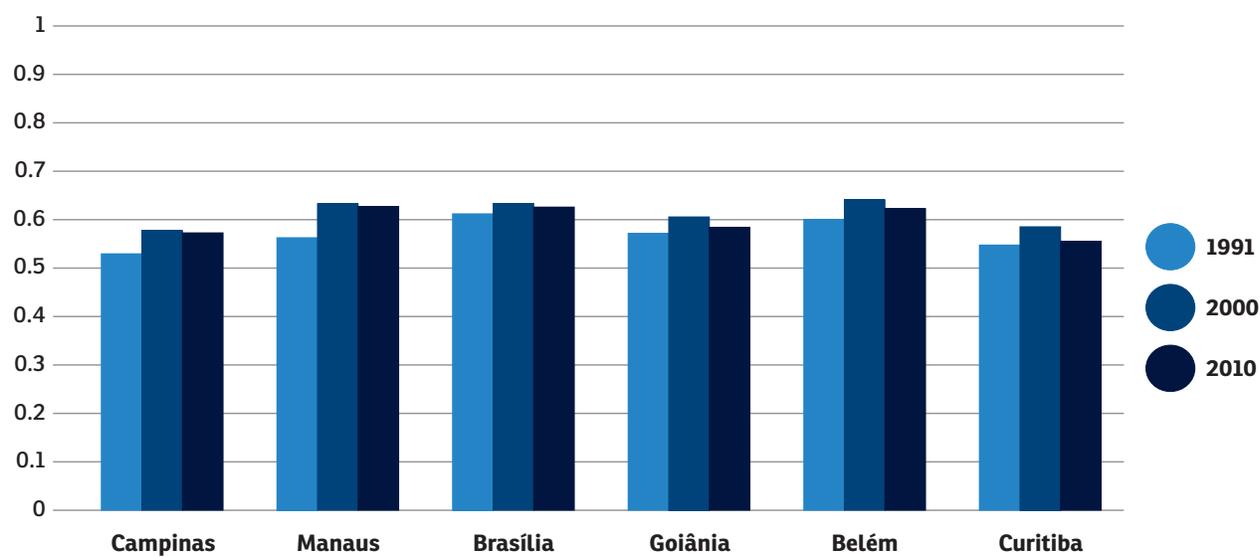
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Figure 7. Selected core cities in MRs with increasing inequality and rising Gini coefficient



Source: IBGE (1991, 2000, 2010), own elaboration

Figure 8. Selected core cities in MRs with improved inequality patterns (lower Gini coefficient) in 2000-10 but not enough to compensate for 1990-2000 trend



Source: IBGE (1991, 2000, 2010), own elaboration

**42. Higher wages in the core cities attract skilled workers, in line with the need of the local economy.** The share of the jobs paying more than 10 times the minimum wage is higher in the services sectors of the core city, and in the manufacturing sector of the cities in the periphery, which is in line with the heavier weight that services play in the core city and manufacturing in the periphery. As urbanization takes place and urban land gets more expensive, manufacturing tends to leave the core city and move to the cheaper sites of the periphery. In fact, most of the high-income skilled workers concentrate in the core of MRs in the Northern, Central-West, and Northeastern regions<sup>21</sup>. However, in the Southeastern and Southern Regions, where MRs have denser functional links in terms of commuting patterns and production linkages between their core and periphery, high-skill workers also find employment in municipalities other than the core (OECD, 2008).

**43. From 2000 to 2010, the share of high-income skilled workers in the MRs decreased.** While the absolute number of high-income skilled workers in MRs increased, their share in total employment decreased. The decrease was more severe in core cities than in the rest of the metropolitan region. In the city of São Paulo the decrease in the share of high-income skilled workers was particularly severe, going from 10 to 7 percent. In the rest of the MR of São Paulo the decrease was of one percent point. The exception to the trend is the Federal District of Brasília, where the share of high-skill workers grew during the period of interest, given the expansion of niche employment in the public, defense, and social security sectors.

21. For example, in Greater Belém, excluding the core, the number of workers earning more than 10 times the minimum salary and holding a university degree increased from 47 to 473 in the period 2000-2010, which represents a stabilization of total employment on the outskirts of the metropolitan area at approximately 1 percent.

## BASIC SERVICE PROVISION

**44. The provision of basic services is gradually improving in metropolitan regions, but inequalities persist.** The 2010 report prepared by Ministry of Cities and Cities Alliance and Census data show a clear trend of improved service provision in urban areas, particularly in the Southern and Central-West Regions. However, access to basic infrastructure (particularly sewage) remains deficient, primarily in peripheral municipalities<sup>22</sup>. In 2010, less than 50 percent of households in cities in the western part of the periphery of the MR of São Paulo were connected to the sewage network. In that same year, less than one-third of households in peripheral municipalities of MR BH had sewage connections (see Table A2- 4, Annex 2).

**45. Even in the more developed and prosperous metropolitan areas of the Southeastern Region, access to basic infrastructure in 2010, while better than in 2000, was still relatively deficient in the peripheral municipalities, particularly in relation to sewerage coverage.** For example, in 2010, less than 50 percent of households in cities in the western part of the metropolitan periphery of Greater São Paulo (e.g. Juquitiba, São Lourenço da Serra, Embu, and Vargem Grande Paulista) were connected to the sewage network. In that same year, less than one-third of households in cities like Confins, Lagoa Santa, and Esmeraldas (Greater BH) had sewage connections.

**46. Infrastructure conditions in peripheral metropolitan municipalities in other Brazilian regions are relatively worse off than in the Southeastern Region.** More than half of the households in most cities on the outskirts of metropolitan areas in the Northeastern Region (Recife and Fortaleza) lack access to sewage, with access to piped water supply, particularly

22. Table A2- 4 in Annex 2 provides a summary overview of data for average access to service in MRs in 2010, and comparison of service provision in the core city versus the rest of the MR is shown in Annex 3.



in Greater Fortaleza, also relatively deficient. The outer municipalities of metropolitan areas in the Northern Region (Manaus, Belém) are even worse off in terms of access to sewerage, water supply, and solid waste collection services. For example, in mid-size municipalities in metropolitan Manaus such as Iranduba (86,840 inhabitants) and Manacapuru (85,144 inhabitants), the vast majority did not have access to sewage in 2010 (only 2 percent and 8 percent of units had access, respectively). In the same year, only Ananindeua, adjacent to Belém, had 12 percent of its households connected to the sewage network, while in the rest of the metropolitan outskirts sewage connections are lacking in practically all households. In most cases, service provision is shown to be higher in the core city versus the rest of the MR. In Fortaleza, for example, 60.0 percent of households in the

core city have access to a general sewage network, compared to an average of 18.6 percent in the rest of the MR.

## HOUSING AND SHELTER

**47. Lack of adequate land use planning and absence of pro-active slum prevention characterizes most of the MRs, especially in the periphery of the large core city.** Initial settlements around the MRs are often unregulated and illegal; the infrastructure provision happening after the new population has settled and pressed the local authorities for such services. This explains the growth of housing units in areas with relatively poor infrastructure, the persistence of slums in the core and adjacent municipalities, their growth in the outskirts of metropolitan areas, and the systemic growth of commuting. Summary maps were prepared for the 15 MR,



which overlay growth trends in formal housing, slums and basic service coverage and provide a clear graphical representation of the spatial patterns of development of these urban areas<sup>23</sup>.

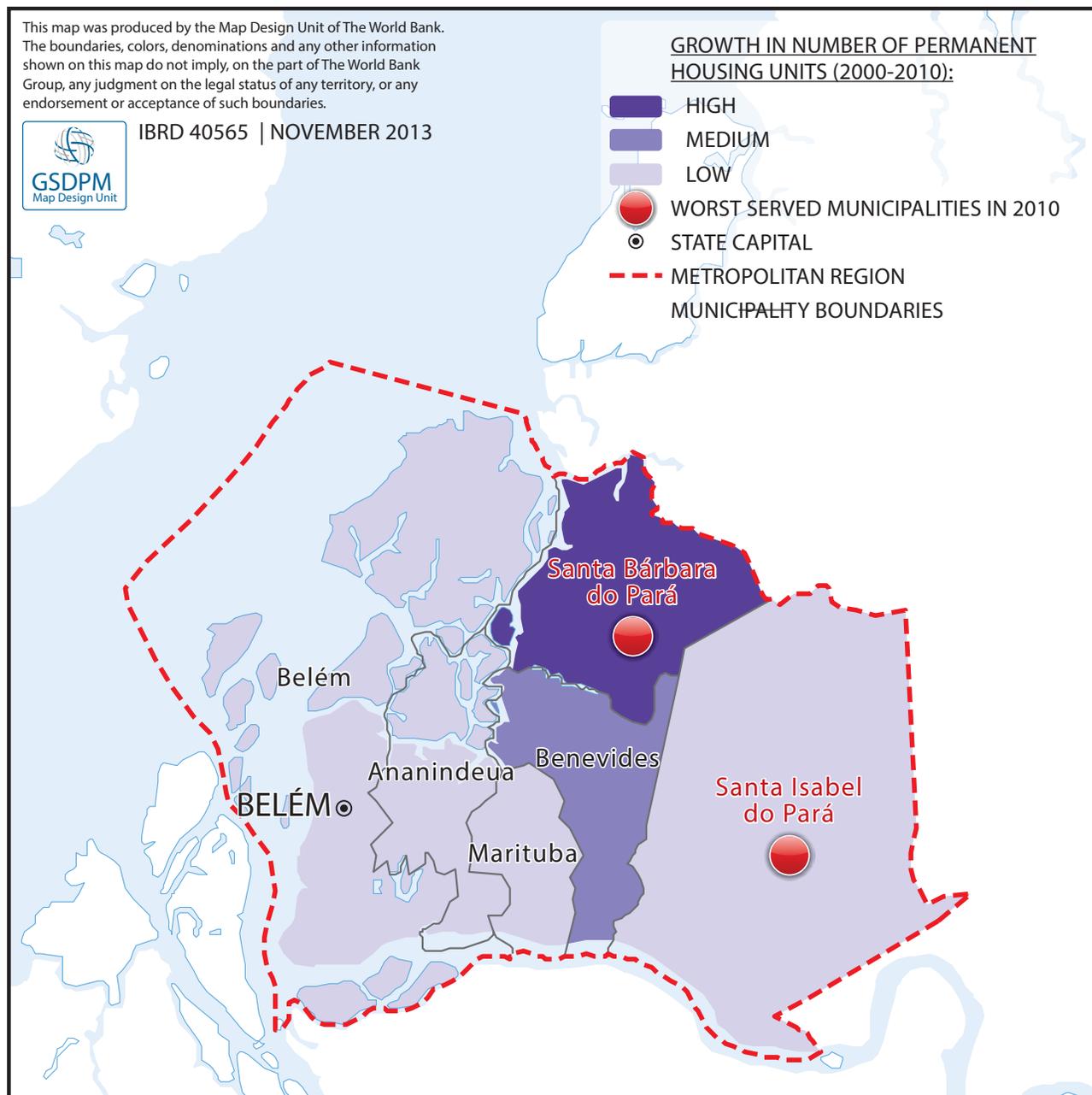
**48. The above patterns follow the fact that migrant or new population cannot afford the prices of land serviced with infrastructure or close to the core city.** Unregulated and informal housing develops in more affordable sites that are in cities with relatively poor basic service infrastructure<sup>24</sup>. This indicates the low elasticity of land supply to demand for housing and shelter. Above all, it shows the dynamics

of the informal markets to answer a very clear demand for affordable land and shelter that the public sector cannot supply in useful time. In the MR of Belém, for example, the municipality of Santa Bárbara do Para stands out as having the highest growth in permanent housing units throughout the MR between 2000 and 2010, but also the worst access to sewage, water and solid waste collection services (Figure 9 and Figure 10). The same pattern holds true for all other MRs.

23. See Annex 3 for information in the 15 MRs.

24. See Annex 3 for an overview of the growth in individual permanent housing units during 2000-2010, for all 15 MRs.

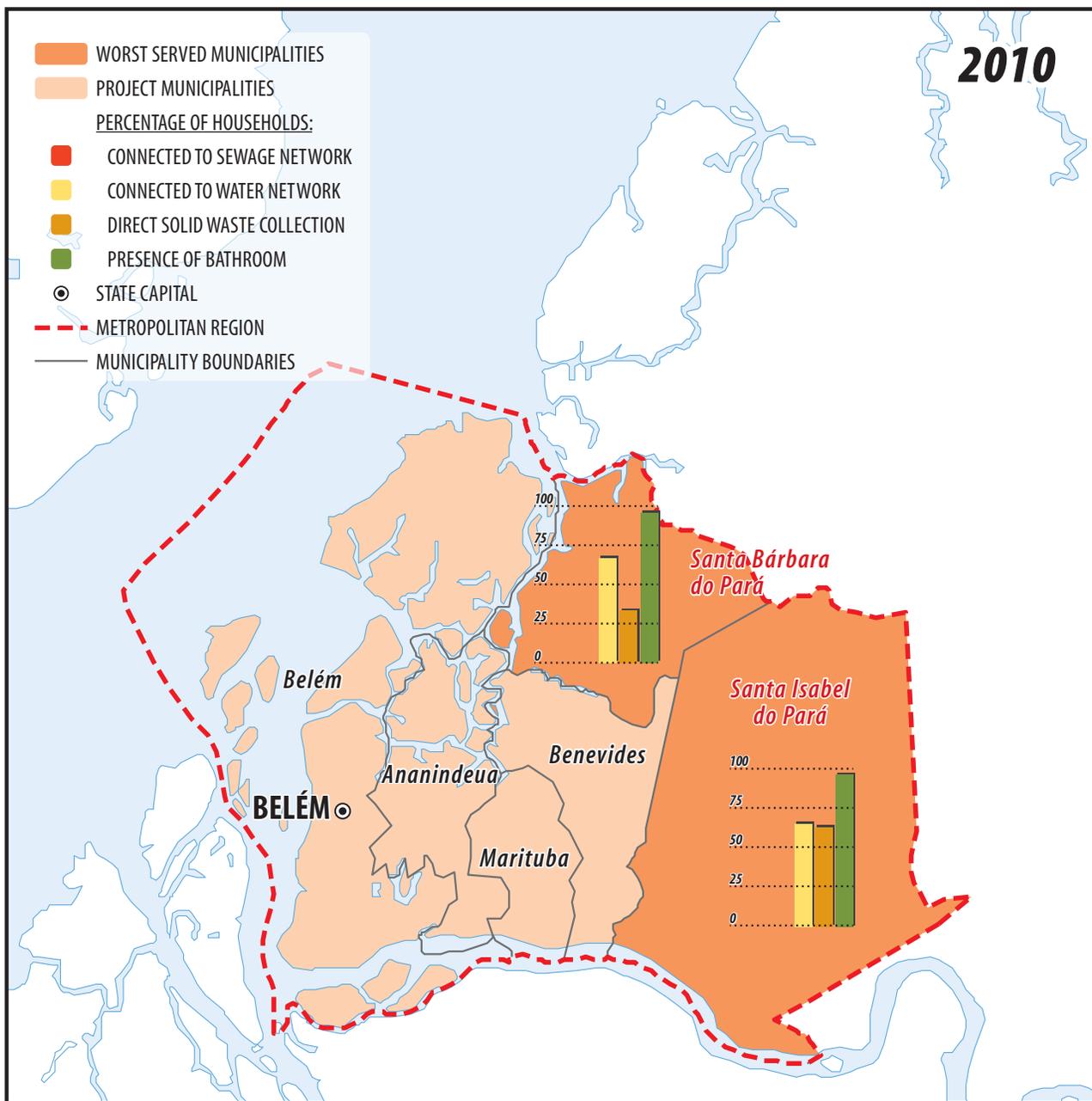
Figure 9. Belem growth in formal housing units and municipalities with worst level of water, sanitation, and solid waste services in 2010



Note: High = top quintiles; Medium = medium quintile; Low = low quintiles

Source: IBGE (2000, 2010), own elaboration.

Figure 10. Belem municipalities with worst level of water, sanitation and solid waste services (2010)



Source: IBGE (2000, 2010), own elaboration.

**49. Despite commitment and awareness at all levels of government in terms of prevention of slum formation, slums (or informal housing) continue to be a feature at the outskirts of most metropolitan areas<sup>25</sup>.** In Belém, for example, the municipalities of Ananindeua and Marituba measured 61-78 percent of the total population living in slums; in São Paulo, the peripheral municipalities such as Franco da Rocha registered 18 percent of households living in slum conditions. Similarly, in Greater Rio de Janeiro, 13 percent of the MR population continues to live in slums, marked by substantial deficiencies in access to services and housing characteristics.

**50. Low income newcomers tend to locate in fragile areas, in environmentally-protected and/or flood-prone areas as well as watersheds.** In the case of Greater Curitiba, the absence of a coordinated policy across municipalities has facilitated the proliferation of slums in the southeast part of the MR, threatening the quality of the watershed that plays a strategic role in the metropolitan water supply (Klink and Denaldi, 2012). This is particularly true for environmentally-sensitive areas, such as river basins and watersheds falling under multiple municipal jurisdictions (World Bank, 2013).

**51. Efforts have been launched by the national government to facilitate access to housing through a combination of upfront target subsidies (as a function of the household purchasing power), use of the private sector to implement large scale construction programs, encouragement for banks to enter into the low income segment of housing finance<sup>26</sup>, and relaxation of minimum plot sizes and other construction limits.** Housing and shelter are private goods that should be financed by the beneficiary, possibly with some form

of up-front subsidy. The most recent program (PMCMV) was launched in 2009 and is targeted to cover the 5.6 million housing deficit in Brazil. The program has had an impact to encourage local and state governments to improve informal settlements, enhance land tenure and extend connective infrastructure. The programs launched by the federal and local governments have made a difference. Between 1990 and 2010, the percentage of urban people living in slums has fallen from 37 to 27 percent<sup>27</sup>.

**52. While the City Statute represented an important achievement in terms of municipal land use planning and the development of instruments for land value capture, it did not provide a mechanism for the coordination of local plans.** It has already proven difficult for local governments to implement master plans aligned with the City Statute at the local level (Santos Jr.; Montandon, 2011). These challenges are magnified at the metropolitan level considering that mayors do not articulate and coordinate the elaboration of these plans in any given metropolitan area. For financial instruments to have a more significant impact, they need to be linked with inter-sectoral planning (horizontal integration) and implemented consistently with coordinated action by municipal, state and federal layers (vertical integration).

## TRANSPORTATION

**53. Commuting has increased in all MRs as expected.** Population growth happens in the lower cost land of the periphery, and people commute to get to the labor market and the higher wages that attracted them to the urban area in the first place<sup>28</sup>. According to the 2010 Census data, half of the MR population spends more than half an hour commuting

25. This is illustrated in Annex 3 for the case studies analyzed.

26. For example, the opening of the Pension Fund to private banks.

27. United Nations Statistics Division, 2012.

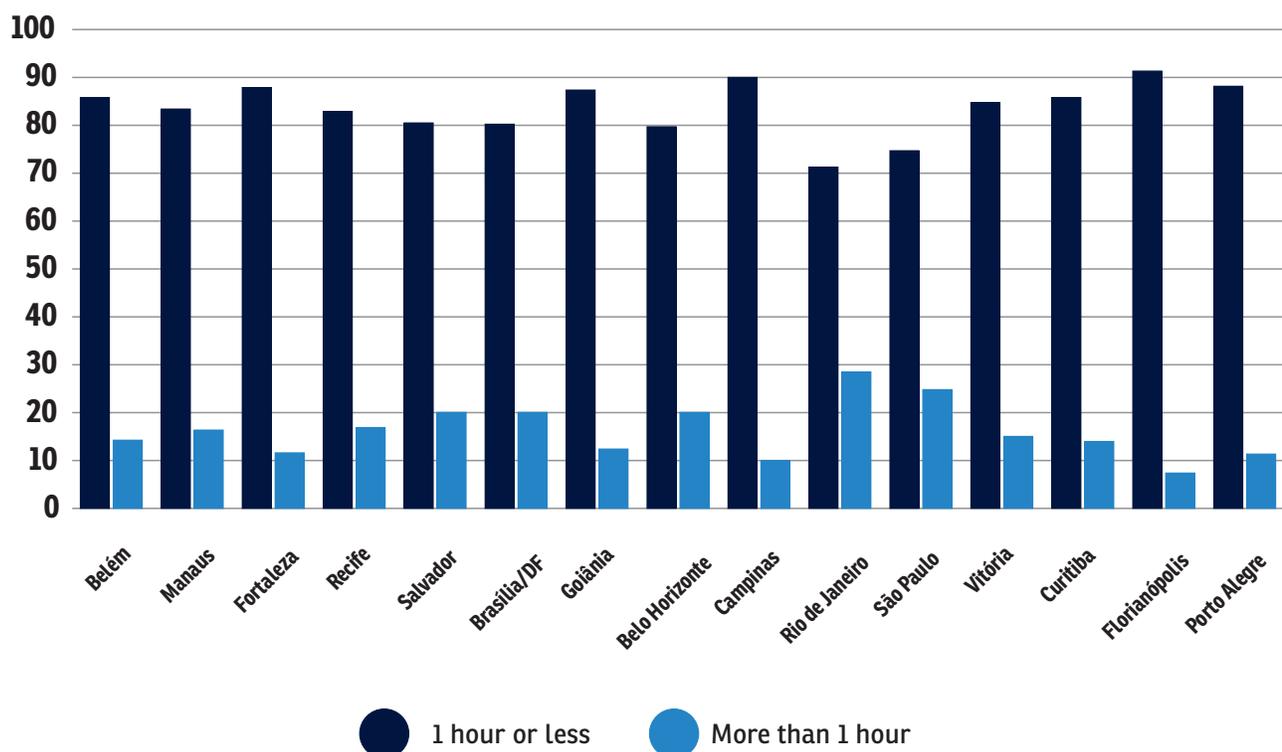
28. Exceptions to the rule occurred in the cities of Belém, Florianópolis, Rio, and Manaus.

to work; for 18 percent the commute is above one hour (see Figure 11). In São Paulo and Rio de Janeiro more than 25 percent spends more than two hours commuting every day. Transport and transit problems, characteristic of metropolitan areas around the world are especially hard in the large Brazilian cities. Commuting is also growing as the new comers travel to the best paying job markets.



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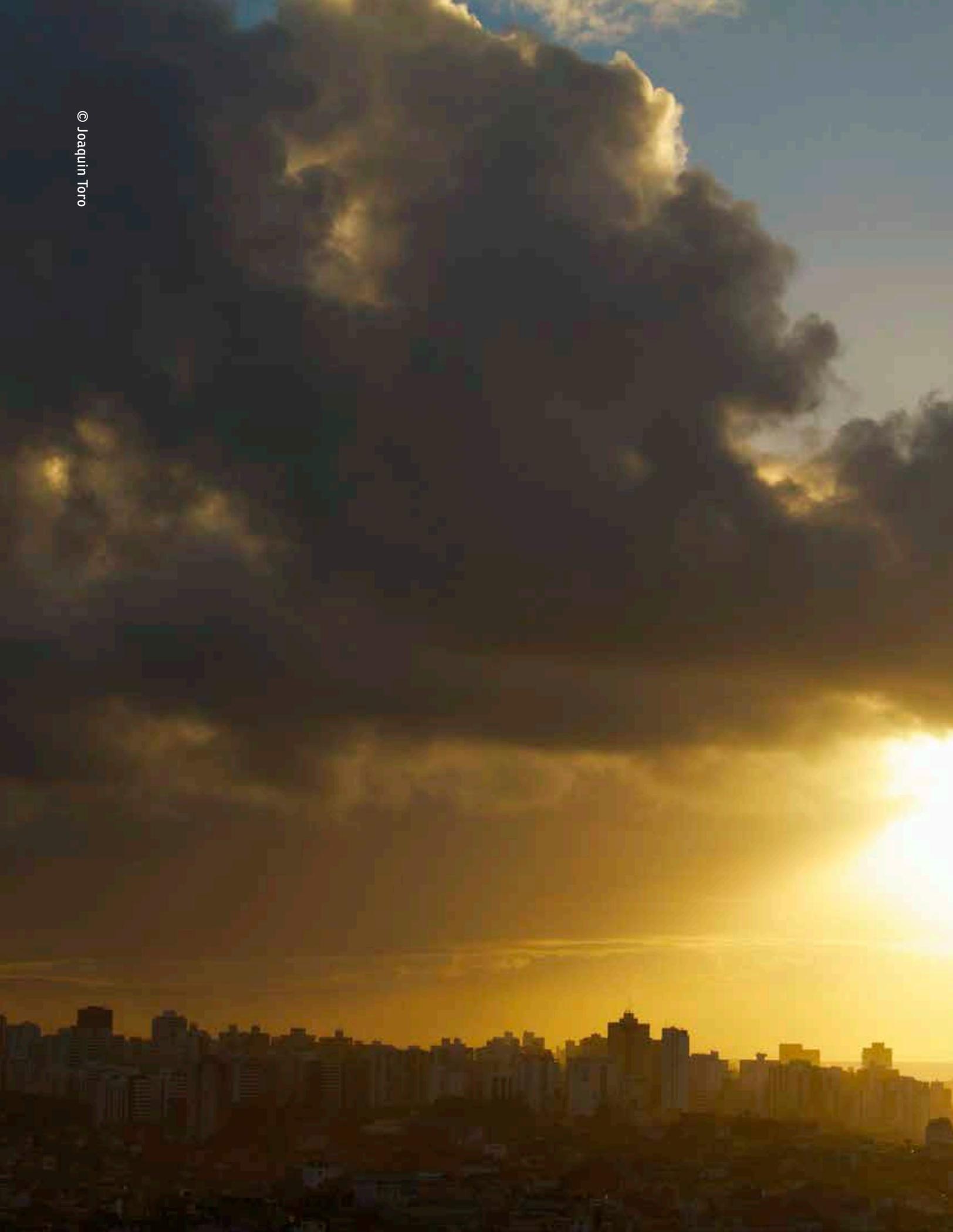
Figure 11. Percentage of commutes greater and less than one hour across the 15 MRs



Source: IBGE (2010) (see Table A2- 5, Annex 2)



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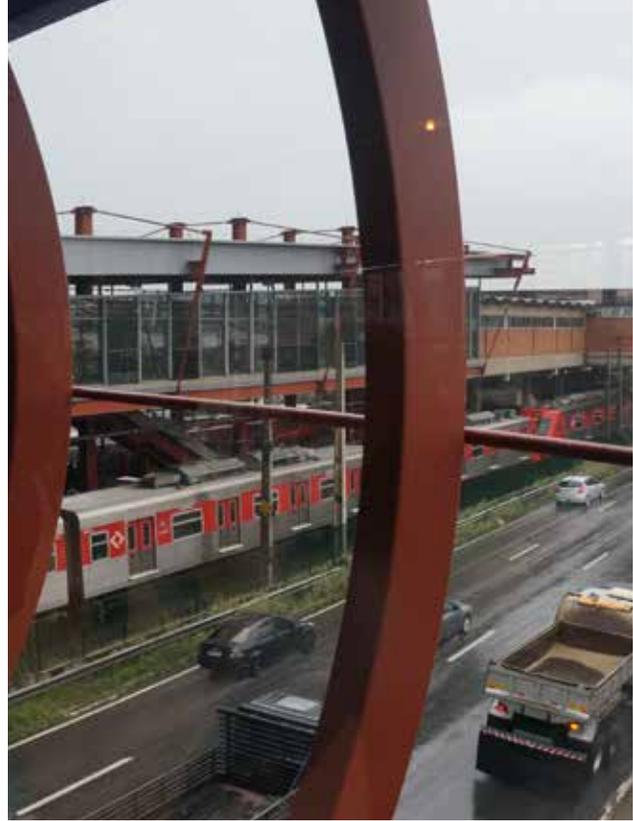


## PART 4. SELECTED METROPOLITAN EXPERIENCES

**54. The following three case studies offer a more in-depth, qualitative look at metropolitan governance.** Each one illustrates a distinct set of attributes contributing to the ongoing challenges and relative successes of metropolitan planning and coordination in its respective urban context. São Paulo presents a compelling case due to the sheer scale of its challenges and potentials, the number of metropolitan initiatives that have taken place, as well as its experimentation with inter-municipal consortia and other forms of metropolitan governance. Recife's historic legacy of metropolitan planning sheds light on innovative participatory planning initiatives. Belo Horizonte is an interesting case study for demonstrating how civil society can contribute to metropolitan institutions.

### SÃO PAULO: LATE AND STATE-DRIVEN MODERNIZATION OF METROPOLITAN GOVERNANCE

**55. The Metropolitan Region of São Paulo (MRSP) is currently home to over 20 million people.** Created in 1973, MRSP comprises 39 municipalities, including the municipality of São Paulo. One of the largest metropolises in the world, it has undergone significant transformations due to the decline in manufacturing industry and the displacement of population from the center to the periphery. In the process of reinventing itself, São Paulo has to deal with a complex metropolitan framework that provides little authority or coordination and a rigid tax system (Wetzel, 2013). Addressing planning, service delivery and financing are crucial aspects of the task ahead.

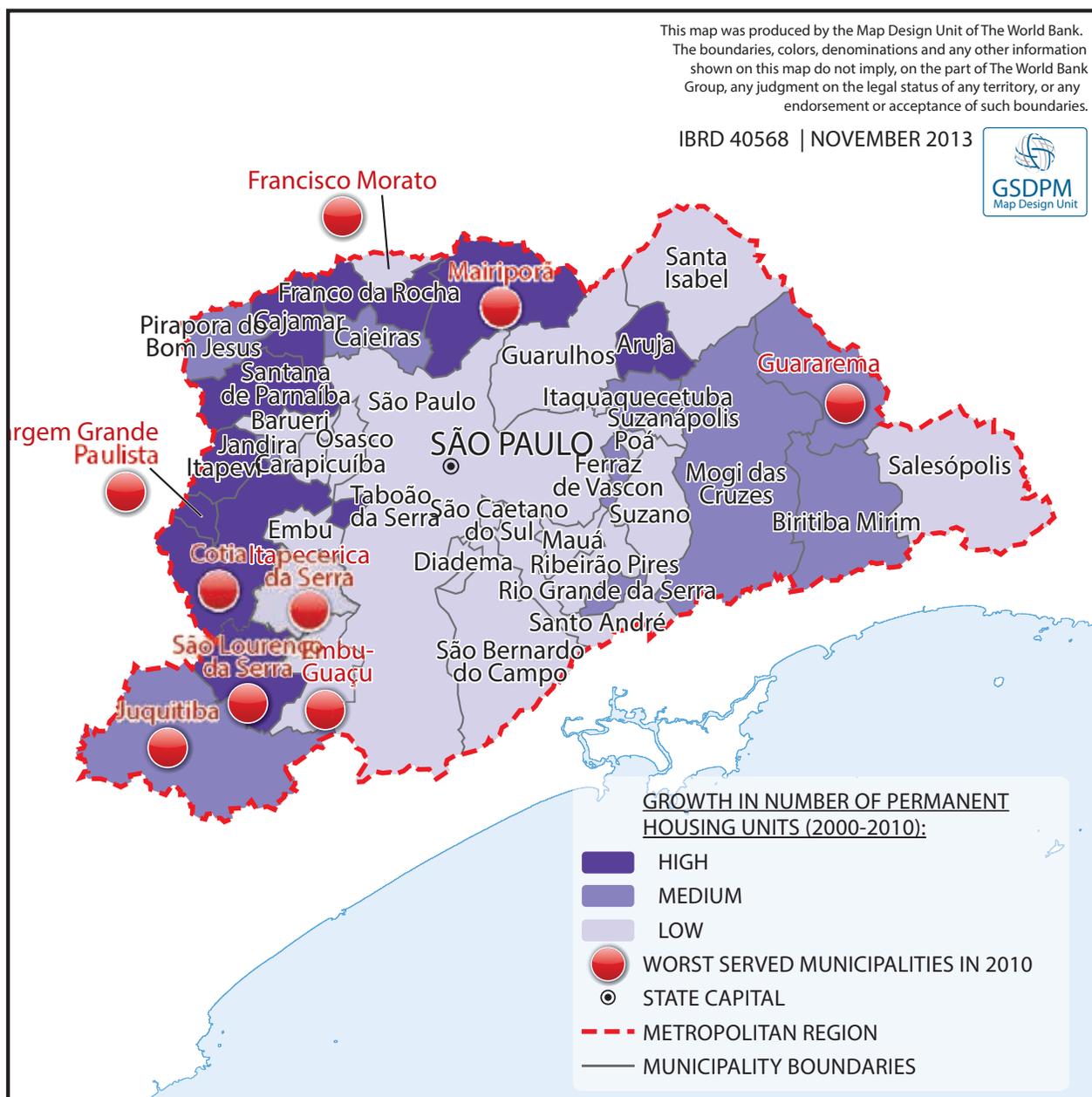


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**56. As in most of the Brazilian MRs, there are important mismatches between land use planning and service delivery as evidenced by the growth of housing units in areas with relatively poor infrastructure.** Greater São Paulo shows relatively faster growth in formal housing construction taking place in the western outskirts of the MR, in municipalities featuring the worst infrastructure conditions, particularly in terms of access to the sewage network (Figure 12) and slums have proliferated in peripheral areas (Figure 13)<sup>29</sup>. As mentioned before, this pattern of settlements generates increased demand for connectivity, as people need to access the labor market for income and better livelihoods. Transport and transit is one of the largest priorities of São Paulo and it needs to continue. About 55 percent of this commuting exceeds 30 minutes, and 25 percent exceeds 1 hour (IBGE, 2010).

29. Both in the capital and surrounding city-regional agglomerations (such as the ABC region), slums have persisted. For example, 18 percent of total units in Mauá and São Bernardo (Greater ABC) are located in slums.

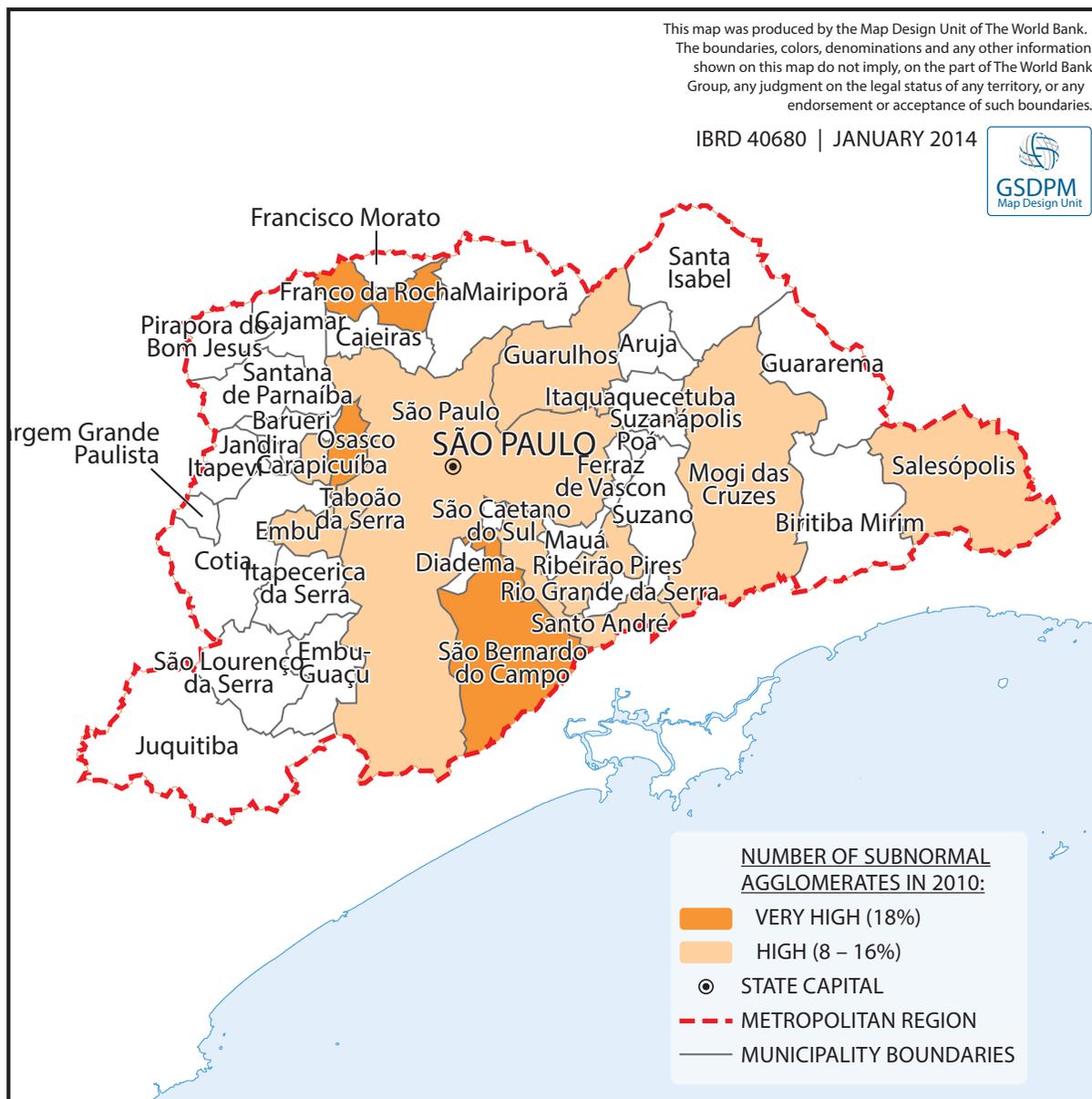
Figure 12. São Paulo growth in formal housing units (2000-2010) and municipalities with worst level of water, sanitation and solid waste services in 2010



Note: High = top quintiles; Medium = medium quintile; Low = low quintiles

Source: IBGE (2000, 2010), own elaboration.

Figure 13. Subnormal agglomerates (2010)



Source: IBGE (2000, 2010), own elaboration.

**57. According to a study performed by the state and Santos Jr. & Montandon (2011), relatively few municipalities in the MRSP have developed and implemented their local master plans.** More specifically, while 45 percent of the municipalities have defined plans, only 27 percent of them have effectively implemented these plans by establishing land use regula-

tions. Likewise, only a few municipalities have made progress through the explicit incorporation of land use and value capture instruments envisaged by the City Statute. For example, a small proportion of cities has effectively worked with low-income housing zones<sup>30</sup> (the MRs of São Paulo and Santos being the relatively

30. Special Zones of Social Interest (Zonas Especiais de Interesse Social, ZEIS).

### Box 6. Washington Metropolitan Area Transit Authority (WMATA)

WMATA is a tri-jurisdictional government agency that operates transit service in the Washington Metropolitan Area. It was created by the United States Congress as an interstate compact between the District of Columbia, the State of Maryland, and the Commonwealth of Virginia. WMATA provides rapid transit service and is part of a public-private partnership that operates the DC Circulator bus system. WMATA has no independent taxation authority and depends on its member jurisdictions for capital investments and operating subsidies. Each of the local jurisdiction finance the investments with municipal bonds and guarantees/matching funds from the Federal government.

Source: "Washington Metropolitan Area Transit Authority Compact". WMATA. Retrieved March 3, 2011.

better performers, with 56 percent and 54 percent of their metropolitan municipalities having established and regulated zoning ordinances, respectively), progressive property taxes<sup>31</sup> (an average of 23 percent of the municipalities), and compulsory use of vacant land<sup>32</sup> (6 percent of the municipalities<sup>33</sup>).

**58. Despite persistent housing, service provision and mobility challenges, the MRSP has only recently begun to launch metropolitan level initiatives.** The responsibility for planning and delivering urban services is shared and frequently contested between state and municipal government, with the federal government providing guidelines and financing for specific programs at sector level. In areas such as metropolitan transportation<sup>34</sup> and environmental planning<sup>35</sup>, state government plays a critical role in the delivery of infrastructure on an inter-municipal/metropolitan level through state agencies and secretariats (including for water resources management and environmental licensing). Only more populous cities such as São Paulo and some inter-municipal consortia, such as in the ABC re-

gion, have succeeded in leveraging local policy in inter-municipal transportation initiatives. In practice, the planning and management of the metropolitan area has not succeeded in integrating sectors and stakeholders (private sector, local and state governments, social movements), generating mismatches among the urban, environmental and economic development agendas.

**59. A major problem in designing and implementing inter-municipal or metropolitan urban transportation initiatives is the high cost of investment and the scarcity of resources that have been made available for urban infrastructure in Brazil.** Faced with shortages of resources, municipalities will naturally invest in local improvements, bus lines, and eventually rapid transit solutions. To plan an integrated transport oriented development in many Brazilian cities (along the example of Curitiba) the central or state government would need to take the initiative, listen to the base, discuss alternatives for efficient urban densification and offer credible sources of finance, including the participation of the private sector, as it has happened in São Paulo. The case of Washington Metropolitan Area Transit Authority is an interesting example (see Box 6), as well as the scheme of the Vancouver Metropolitan Authority.

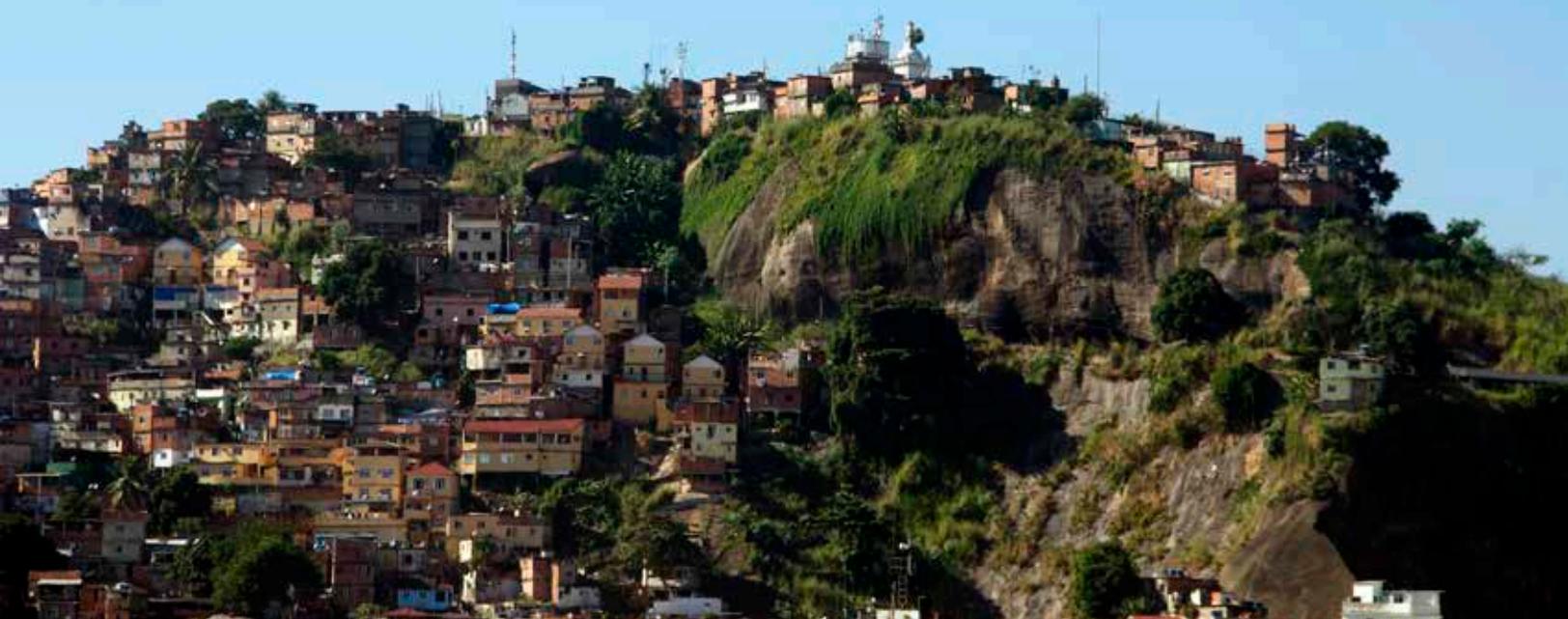
31. IPTU Progressivo no Tempo.

32. Parcelamento, Edificação ou Utilização Compulsórios.

33. Metropolitan regions have a better performance, with Santos showing the highest proportion of municipalities that have elaborated and regulated a local master plan (77%).

34. Empresa Metropolitana de Transportes Urbanos de São Paulo, or EMTU, and the state-level Companhia Paulista de Trens Urbanos, or CPTU).

35. Major agencies are the state-level Secretaria de Saneamento e Recursos Hídricos and Companhia Ambiental do Estado de São Paulo, or CETESB.



**60. Governance of São Paulo shows the contradictions coming up from the 1988 Constitution.**

Over time, a number of institutions have been created but they have not been able to play more than an advisory role. Planning and coordination is the responsibility of EMLASA (*Empresa Paulista de Planejamento Metropolitano* or Metropolitan Planning Company for the Greater São Paulo Metropolitan Region), a state-level enterprise created in 1974. In 1994, the state law created the Development Council – including representatives of each municipality and state government. Metropolitan transportation is overseen by the Metropolitan Enterprise for Urban Transportation (EMTU/SP) and by the São Paulo Company for Metropolitan Trains (CPTM), both under the responsibility of the State Secretary for Metropolitan Transportation. In May 2006, the governments of the state and municipalities signed an agreement creating the

Integrated Transport Executive Committee as an Executive Board for the metropolitan transport system (Wetzel, 2013). The objective was to strengthen partnership, align urban transport planning and oversight, promote efficient operational standards, and advocate an integrated vision to ensure affordability of transport. In practice, the Board has functioned mostly as an ad hoc board of institutions generally lacking capacity and continuity to analyze the questions.

**61. There have been recent efforts to set up a metropolitan institutional framework.**

The recent establishment of the MRSP (Complementary Law No. 1166/2011) and the expected role to be assumed by EMLASA represent major initiatives to move beyond sector-based solutions toward formal institutional governance structures. EMLASA is expected to oversee the state's ambitious macro-metro-



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politan strategy, including development of guidelines and coordinating policy with local agencies in the various MRs within the state (Santos, Campinas, São Paulo, and Vale de Paraíba/Litoral Norte). Specifically, EMPLASA will coordinate an internal state committee set up to streamline metropolitan-area initiatives. The committee's ongoing projects include the elaboration of housing plans for the respective metropolitan areas in the state, although this initiative has faced difficulties in that relatively few municipalities have both developed and implemented their local master plans. EMPLASA is further supported in its work by a Development Council (with representatives of the state government, the legislative assembly, and the municipalities); a Consultative Council (representing civil society and its views on specific issues); a regional enterprise (*entidade autarquica*, the executive arm of the gov-

ernance structure, able to develop plans, collect revenues, and carry out other functions as needed); technical advisory groups (*câmaras temáticas*); and a Regional Development Fund (responsible for conducting feasibility studies and providing technical assistance in an effort to reduce the inequalities within the region).

**62. The success of the horizontal collaboration is exemplified by the Great ABC Region in the state of São Paulo.** The Greater ABC – a bottom-up arrangement – is viewed as a set of flexible and pragmatic mechanisms aimed at enacting and executing policies for region-wide socio-economic development as well as developing urban areas and improving the environment. The ABC region includes seven municipalities (Santo André, São Bernardo, São Caetano, Diadema, Mauá, Ribeirão Pires, and Rio Grande da Serra) located in the south-

eastern part of the state. The economy of the area is largely dependent on the automobile industry. This made the area particularly vulnerable to informal settlements and slums – as low wage workers hired by the automobile industry settled in precarious areas such as the Watershed Protective Area – as well as to economic downturns that would produce high level of unemployment in the region. In the 1980s, the ABC region suffered from a severe recession – part of the national economic problems. Local mayors and members of the civil society played a pivotal role trying to promote inter-municipal collaboration and address problems raised by the crisis.

**63. In 1990, the seven mayors of the ABC region formed the Inter-municipal Consortium of the Billings and the Tamanduatehy Basins with the objective to manage shared water resources by using solutions for waste collection and disposal.** When some mayors showed some reluctance towards the consortium, civil society asserted itself and established the Great ABC Citizen's Forum in 1993. Since then, the group of people actively participating in the forum has enlarged (including workers unions and environmental groups) and they were crucial in the formation and consolidation of this consortium. The Great ABC Chamber was created in 1997 to ensure and consolidate metropolitan co-operation, thanks to the commitment of the new mayors – their engagement allowed the chamber to emerge as an important tool of metropolitan co-operation. The second factor was the connection and common vision between the state governor and the mayor of Santo Andre who was both the president of the chamber and mayor of the largest city in the consortium, despite the fact that they belonged to opposite parties. The Chamber and the Citizen's Forum have created the space for negotiation and reaching important agreements.

More than 50 agreements have been signed since the agency was created. In 1998, the ABC Economic Development Agency was created to discuss the common issues and development strategy for the region. Civil society and non-government actors hold 51 percent of the shares of the agency. The seven mayors hold 49 percent of the voting power. This ensures that the fate of the agency does not depend on electoral cycles and that private interests and community continue to lead.

**64. Transport policies show lack of coordination across initiatives.** The Consortium's regional mobility plan will lead to improvements in the implementation of municipal transportation plans and investments; however, the plan is not supported by broader policies at the metropolitan level. The regional mobility plan is neither part of the land use master plan in the ABC region itself, nor is it connected to a broader metropolitan initiative in the area of transportation and mobility. The plan's total investments are projected to approximate R\$7.8 billion (US\$3.6 billion)<sup>36</sup>. Moreover, the plan's main objective is to improve the regional road system, which is unlikely to change the existing car-oriented pattern of mobility. It will also allow downsizing of a number of overlapping municipal bus lines. At the same time, the state government is unlikely to yield its leverage over the planning and financing of metropolitan transportation infrastructure in order to improve its coordination with metropolitan cities<sup>37</sup>. For example, while the State has an investment plan for the metro system, it has no metropolitan plan for transportation that is shared with cities and inter-municipal consortia. In May 2006, the state and its municipalities created the Integrated Transport Executive Committee. Unfortunately, this institution failed to lead the metropolitan transport agenda and has been functioning on a

36. To be financed partly with PAC resources.

37. According to some of the officials interviewed in the ABC region, the state has frequently contested the legality of inter-municipal lines in the ABC region.

mostly ad-hoc basis, without the capacity and continuity needed to tackle the large transport challenges of the region (Darido, 2011).

**65. Other consortia (e.g. Consórcio intermunicipal da Região Sudoeste da Grande São Paulo, CONISUD) have advanced in several areas of collaboration with the state authorities to solve the urgent problem of slum urbanization and prepare 5-year development plans.** In April 2014, CONISUD and the São Paulo State Environment Secretary agreed on the procedures to approve urbanization programs in ZEIS in hydrological basins (areas de mananciais). This could make possible a faster approval of housing programs and land titling, allowing the construction of social housing and the provision of shelter for more than 10,000 people. On September 6, 2014, CONISUD announced an initiative to train all municipalities with a population larger than 200,000 in the preparation of a territorial participative multi-year plan for 2014-2016, together with the Ministry of Planning.

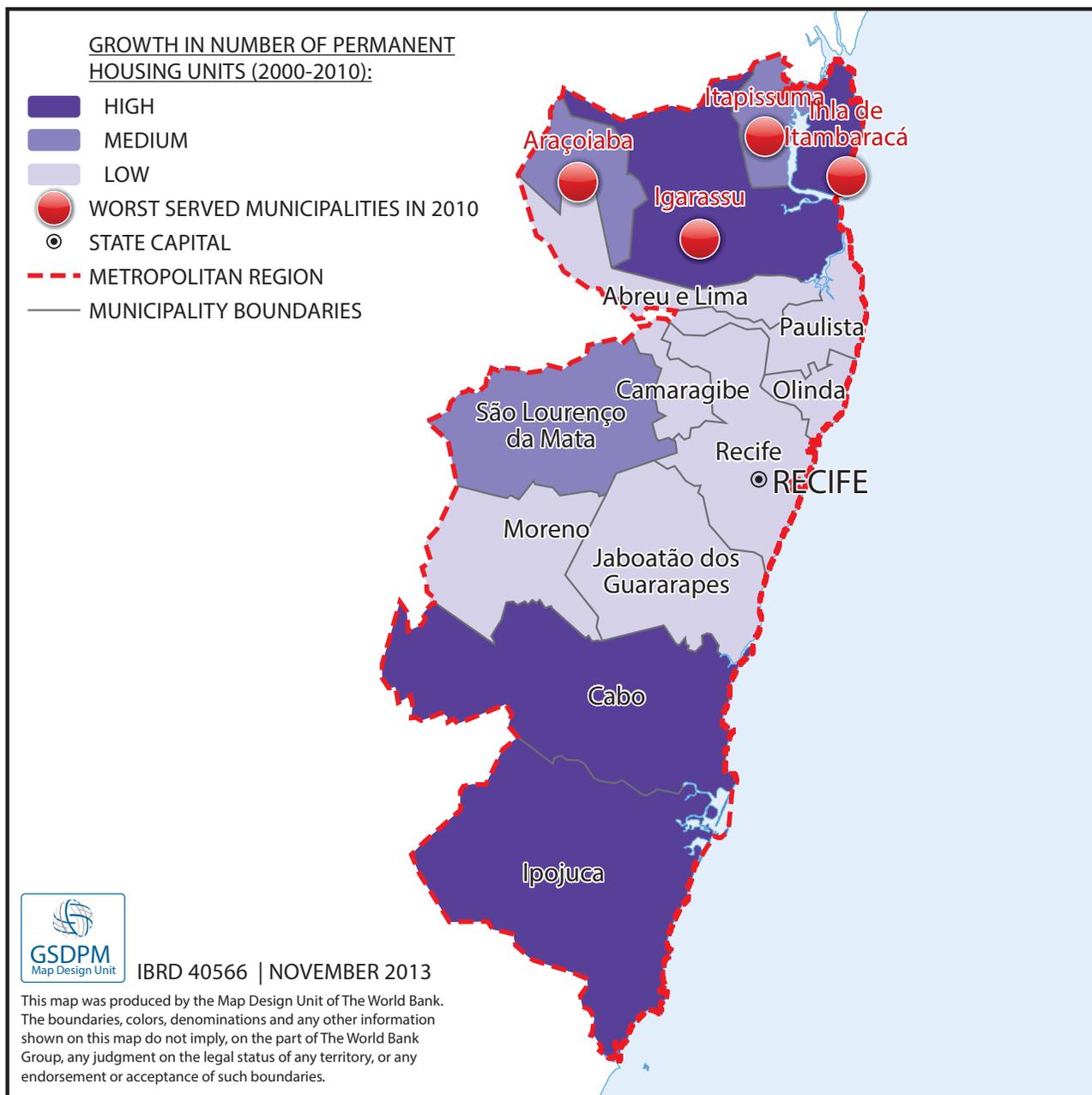
### RECIFE: METROPOLITAN PRAGMATISM AND THE CHALLENGE OF CONNECTING INSTITUTIONS, PLANS AND PROJECTS

**66. Located in the state of Pernambuco, the MR of Recife is home to almost 4 million people in 14 municipalities.** While it is the most populated and wealthiest metropolitan area in the Northeast of Brazil, it records high levels of urban poverty, high income disparities between the core and the rest of the MR<sup>38</sup>, an inconsistent service network, and many environmental risk factors, due to its location between two rivers and the presence of ecological reserves to the west of the region. Similar to oth-

38. While 75 percent of the working population older than 10 years living in the capital are earning up to 3 minimum salaries, this figure surges to 86.7 percent in the rest of the metropolitan area. On the other hand, the share of the population earning more than 10 minimum salaries is 6.7 percent in the capital, while it drops to a mere 1.4 percent in the rest of the metropolitan area.

er MRs, the rapid economic transformations in the Recife MR have not been accompanied by an adequate delivery of service provision and planning over real estate and land markets (Figure 14). Housing units are expanding at more than 3 percent a year – mainly in the outskirts, and access to services is poor: only one-third of household units are connected to the sewage network. Slums have also proliferated in these fast-growing peripheral cities, while also continuing to exist and/or grow in the core and adjacent cities of the metropolitan area during the period considered (Figure 15). Rising land prices in the core of the MR have contributed to greater demand for location in the periphery and greater demand for transit solutions. Recent investments, including the establishment of the Suape port (expected to mobilize R\$ 1.2 billion in infrastructure funds) and the FIAT car factory north of Recife are increasing jobs and income, as well as demand for office space and overall land values in the metropolitan Recife. In this context, land policies that enhance supply of serviced land are increasingly important.

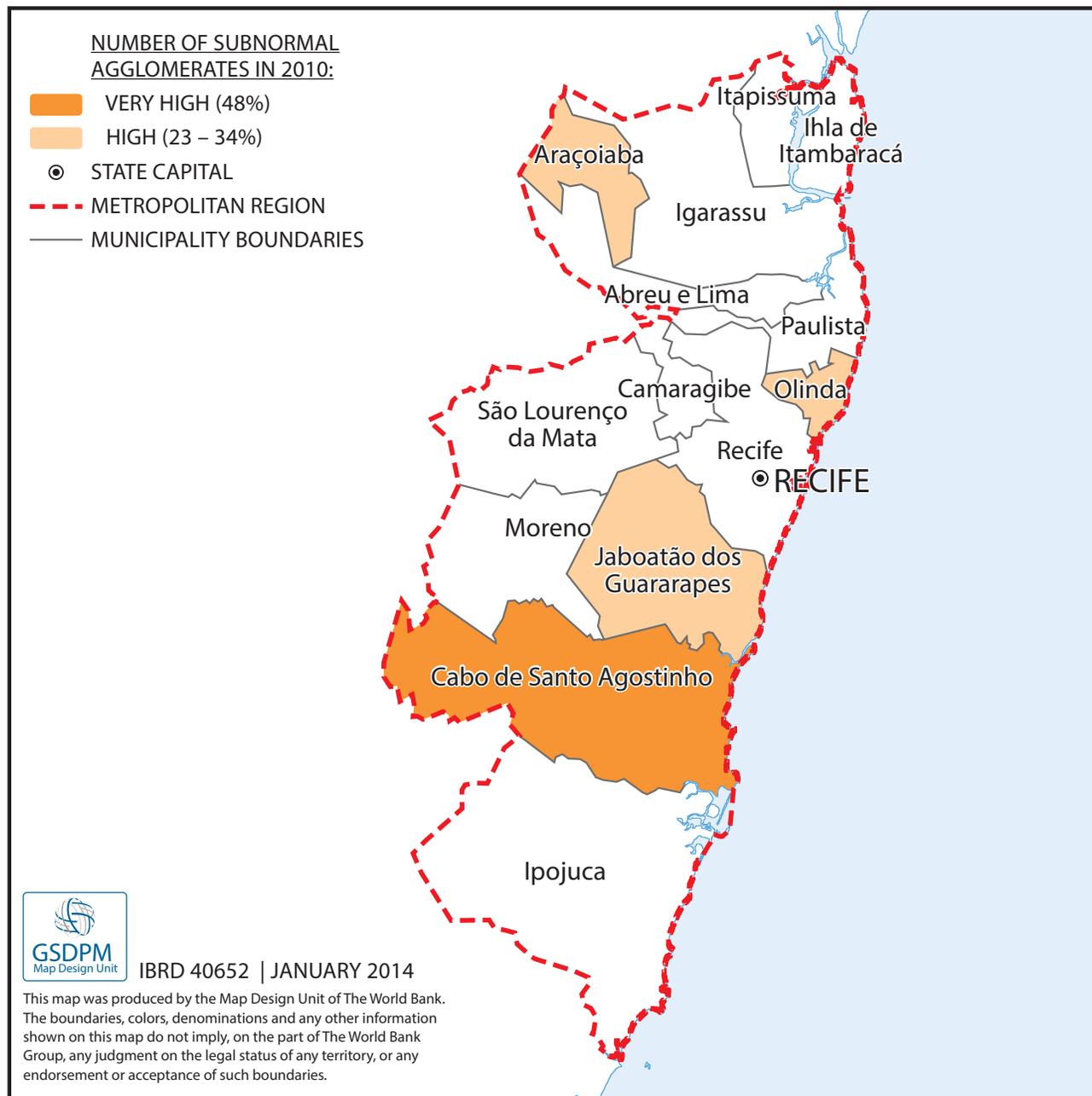
Figure 14. Recife growth in formal housing units (2000–2010) and municipalities with worst level of water, sanitation and solid waste services in 2010



Note: High = top quintiles; Medium = medium quintile; Low = low quintiles

Source: IBGE (2000, 2010), own elaboration.

Figure 15. Subnormal agglomerates (2010)



Source: IBGE (2000, 2010), own elaboration.

**67. At the state level, responsibilities for metropolitan governance are fragmented.** The State Agency of Planning and Research of Pernambuco (Agência Estadual de Planejamento e Pesquisa de Pernambuco, CONDEP/FIDEM) is formally responsible for metropolitan planning and control, but has no effective control over the planning and implementation of projects. Unlike other MRs where 1970s-era metropolitan planning structures were dismantled, FIDEM still exists. Having gone through a series of reforms since it was created in 1975, FIDEM is currently linked to the State Secretariat for Planning, Budgeting and Management. Its main responsibilities are to develop strategic studies around the institutional re-organization of planning and management in Greater Recife, collect geographic information, compile a portfolio of metropolitan-wide projects, and issue no-objections on issues related to land use before they are received by the respective municipality<sup>39</sup>. However, the agency's minimal authority has limited the efficacy of its proposals for the metropolitan area, including the creation of a multi-sector public consortium with a political and operational role<sup>40</sup>. In 2007, the State of Pernambuco created a Secretariat for Cities to address some metropolitan challenges, linked to shared planning and management across sectors and levels of government.

**68. The Secretariat for Cities has become an influential player supporting consortia in transport and solid waste sectors.** The Transport Consortium created in 2008 has an innovative structure within the Deliberative Council that voids dominance by the state and requires that the state negotiate with (smaller) municipalities. This also constitutes a primary challenge for its enlargement and effective functioning, due to the delicate political balance at the municipal level, and the Consortium requirement that cities downsize and streamline informal local transportation systems in order

to avoid duplications of lines<sup>41</sup>. By and large, the consortium is led by the state, with little participation from cities. It is regulated by a state agency (responsible for regulating the management of public services such as provision of gas and transport) through a Transport Council that deliberates about norms, tariffs, and signs the contracts with municipalities. Currently only Recife and Olinda are members, along with the state, while Cabo and Camaragibe are preparing for membership. In the area of Solid Waste, due to pressure to extend service, the State Secretariat of Cities took the lead in establishing a public consortium for residential solid waste. This would include all metropolitan cities, would have the legal status of a public-private partnership and is already in advance planning stage. Metropolitan governance in Recife could improve by promoting closer links between the CONDEP/FIDEM and its planning activities and the pragmatic service delivery approach of the State Secretariat for Cities. However, all the issues dealing with land use planning and control remain an unsolved challenge.

**69. Coordination among mayors around sustainable metropolitan land use and urban development has made some progress.** The City of Recife has created a Metropolitan Pact, a platform of the 14 municipal planning secretaries that meet on a regular basis. In the short run, priorities were basic sanitation and solid waste, mobility, health, urban violence, and preparations for the 2014 World Cup. In the medium-term, the forum is expected to elaborate a proposal for the reform of Recife metropolitan model. There is no consensus, however, on the role of this informal municipal platform and its potential contribution to a shared concept of metropolitan governance that would involve both cities and the state government of Pernambuco. Some may-

39. Law 6766/1979

40. At the end of 2012, CONDEP/FIDEM developed a proposal to create a new multi-sector public consortium formed by representatives of the State and the 14 metropolitan municipalities, and advised by CONDEP/FIDEM.

41. Small municipalities have found it complicated to broker a political solution enforcing governance of the many privately operated bus companies. As a result, they stayed out and only two adhered to the Consortium so far, Recife and Nova Olinda.



ors suggest that the Metropolitan Pact should not replace the existing structures such as the Metropolitan Council where representatives of the municipalities and the state sit. It seems that the Pact is seen as a way to focus the energies in specific problems that need urgent action.

## BELO HORIZONTE: LIMITS, POTENTIAL AND RESISTANCE SURROUNDING METROPOLITAN INNOVATION

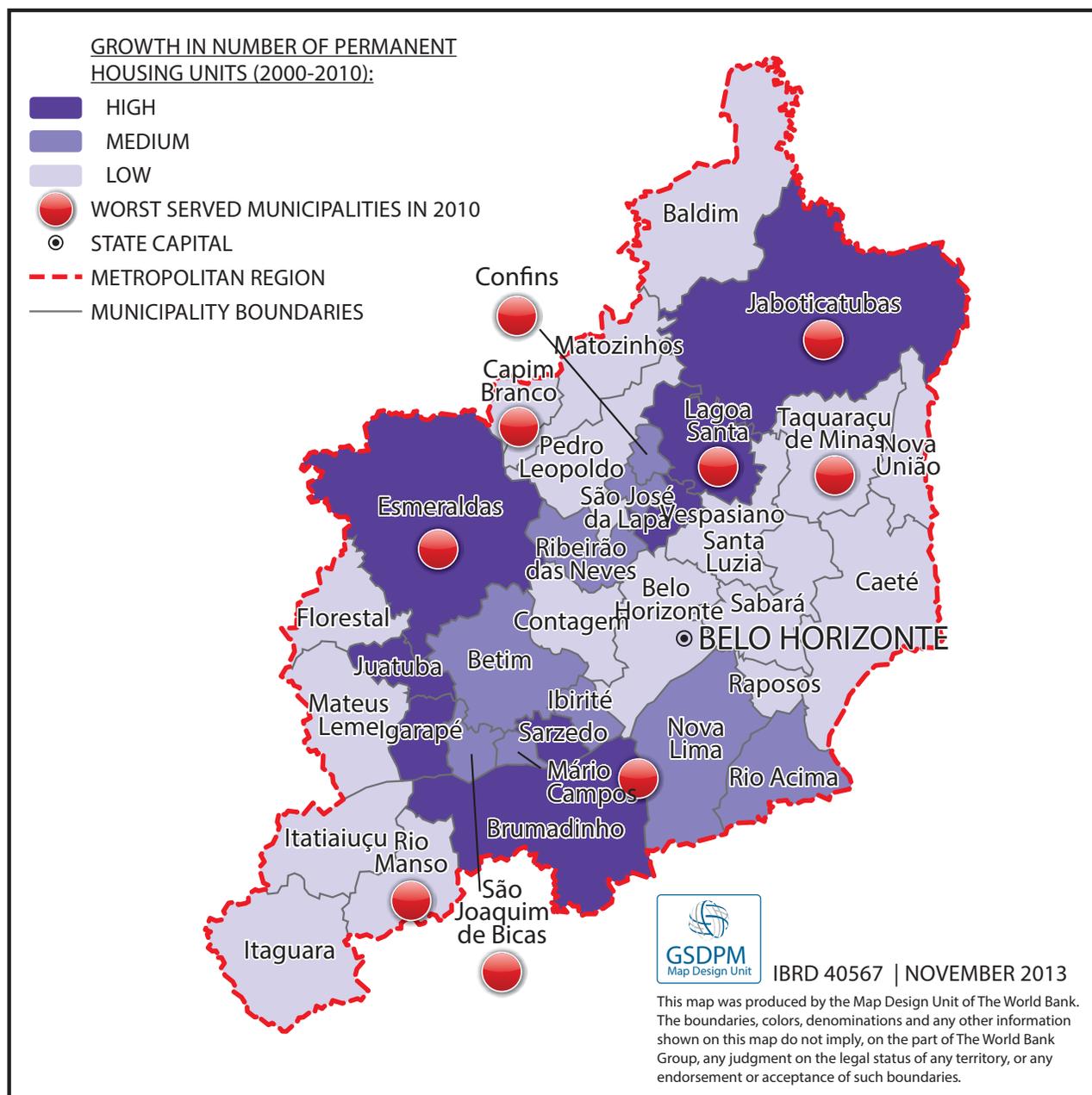
**70. The Metropolitan Region of Belo Horizonte (MRBH) is home to about 5 million people and 34 municipalities.** It is the third-largest metropolitan region in Brazil and its fourth-largest economy. MRBH is an important industrial, mining, and cultural center. The service industry has expanded since the 1990s, and so has the development of important biotechnology and computer science clusters. On the social side, the region depicts the usual inequalities in income and service delivery across munic-

ipalities and within the large cities. New settlements have grown in cities with deficient infrastructure, namely in terms of sanitation and access to sewage<sup>42</sup>, as well as a proliferation of slums in the outskirts. In parallel with the growth of settlements in the periphery, demand for connectivity with the core city has increased with impact on commuting time<sup>43</sup>.

42. In Esmeraldas and Jaboticatubas, 20 and 35 percent of households, respectively, have access to the sewage network. In Vespasiano, 20 percent of the population is without access to the sewage system.

43. During this period, the number of residents commuting in Esmeraldas (59 to 64 percent), São José da Lapa (68 to 74 percent), and Vespasiano (80 to 85 percent). Moreover, 95 percent of total trips for work or study in fast-growing bedroom communities/cities such as Ribeirão das Neves are toward destinations outside the municipality. Commuting takes more than 30 minutes (IBGE, 2010).

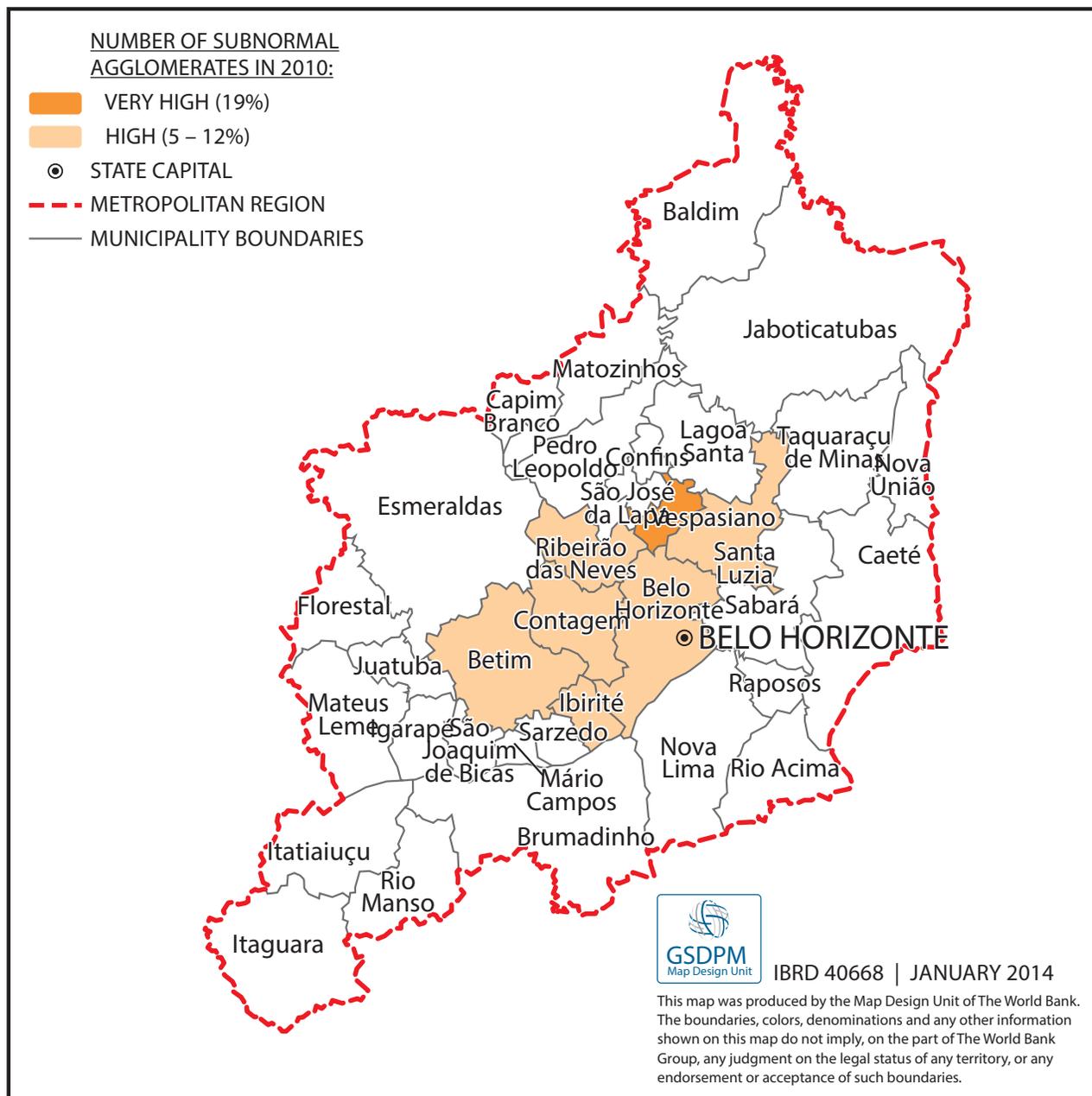
Figure 16. Belo Horizonte growth in formal housing units (2000-2010) and municipalities with worst level of water, sanitation and solid waste services in 2010



Note: High = top quintiles; Medium = medium quintile; Low = low quintiles

Source: IBGE (2000, 2010), own elaboration.

Figure 17. Subnormal agglomerates (2010)



Source: IBGE (2000, 2010), own elaboration

**71. MRBH is also an interesting model of state-lead collaboration.** MRBH was originally created by the Federal law in 1973, comprising 14 municipalities. The original legislation based on the standard governance model at the time, created PLAMBEL (Planejamento da Região Metropolitana de BH) a state-level enterprise in charge of developing and implementing the Metropolitan Plan. PLAMBEL became extinct in 1996. In 2006, the state approved a new institutional framework for metropolitan management that has been in place to date. The Metropolitan Assembly and the Deliberative Council for Metropolitan Development are responsible for metropolitan management, while the Metropolitan Development Agency is responsible for providing technical support. In addition, two tools were established to support the planning and financing aspects of metropolitan management: (i) the Metropolitan Plan (PDDI, Plano Diretor de Desenvolvimento Integrado); and (ii) the Metropolitan Development Fund.

**72. An additional innovation was the participatory development of the Metropolitan Plan (PDDI).** The PDDI aimed at creating some synergies among the local land use and master plans that had been prepared by some municipalities<sup>44</sup> as requested by the City Statute in 2001. Despite the commitment of the state and civil society, the PDDI has been hampered by fragile political articulation between the state and the municipalities as well as about the role played by community participation and NGOs. Smaller municipalities seem to be participating less in the discussions that take place in the metropolitan assembly regarding zoning and master planning and feel that their influence in decision-making processes has been marginal.

44. IPEA, 2013. 40 anos de Regiões Metropolitanas no Brasil, Volume I, Projeto Governança Metropolitana no Brasil, Brasília.

**73. Policy coordination of housing and urban planning has become harder as prices of real estate have increased.** As master plans impact the availability of land for office space and residents, they create rents and land-based profits for some groups and losses for others. In addition, the high demand for office space and residences has led to an escalation of prices and made subsidizing house more expensive for the municipalities and for the beneficiaries. In such conditions, the policy under the National Housing Policy to provide subsidized housing to residents earning up to three minimum wages is becoming harder to achieve<sup>45</sup>. At market prices, the objectives of the PMCMV would only be possible if municipalities transfer land in kind, a policy that local governments are reluctant to do as these land are a source of potential revenues that could be allocated for poverty alleviation elsewhere. Thus, while the state has made significant efforts to promote metropolitan planning and the broad participation of cities, the results have been rather limited. Box 7 illustrates some incentives used by different countries to help poor locations with target subsidies for low-income housing.

**74. A large public consortium of transport and a PPP to construct a landfill have been negotiated, including municipalities and the state government.** The former was established to coordinate lines, prices and the operation of the integrated transport system. When investment is needed in some cities, the shares of investment may be flexible (Klink, 2008). Additionally, the public consortium agency is preparing a PPP project for urban trains (Transporte sobre Trilhos Metropolitanos, Trem) to restructure the existing metropolitan railway system as suggested by the PDDI. These efforts focused on improving efficiency in the delivery of transport services will improve the image and relevance of the agency and promote a

45. For details on a real estate bubble in Brazil's metropolitan real estate markets, see Mendonça and Sachsidá (2012).



better collaboration across municipalities and the state government. Integration, long-term plans and a full-scale development strategy for the MR could be the result of successes in this front.

**75. Most recently, the state has promoted a Public Private Partnership (PPP) among 42 municipalities of the enlarged metropolitan region (excluding Belo Horizonte and Sabará) to construct and operate a metropolitan landfill.** It is possible that pragmatic efforts focused on specific service delivery functions may yield faster and more sustainable impact in the territory, building consensus beyond stakeholders' demand. Integration among sectors, however, has yet to come.

## CASE STUDIES' CONCLUDING REMARKS

**76. The approach to metropolitan issues in Brazil is evolving rapidly.** The three cases presented above are examples of how local and state governments have organized their efforts to analyze local development problems and come out with different solutions. As briefly indicated, the examples reflect the individual reality of each metropolitan area and the absence of a single "one-size-fits-all" approach. Decentralized systems of fiscal federalism rooted into a strong culture of local rule and democratic value will always create this arrangement of multiple associations, each created as a function of the objectives and characteristics of the demographic and political base. This variety of forms is totally compatible with the ultimate goal – to provide efficient services to the community and help design and plan an inclusive future for all. The above experiences show the range and scale of metropolitan initiatives, institutions, and policy mechanisms currently employed in these MRs. They also exemplify the dynamism of metropolitan governance, whether led by the state or by the municipalities, and the potential to extract lessons of these ongoing experiences. Some of these lessons will be important and useful to guide the further regulation, by each MR, of the provisions set by the *Statute of the Metropolis* (see Part 6).

### Box 7. Incentives towards affordable housing – an international perspective

International experiences demonstrate that the success of affordable housing programs at municipal level depend on the availability of affordable serviced land. In periods of accelerated development, demand for office space and residences increase and urban land prices sky rocket. To offset this outcome, municipalities and states need to take measures to remove any excessive controls on land use or buildings permit (like height or space floor ratios) or offer subsidized housing in places with services and connected by public transportation to the labor market. Examples of the public sector's capacity to leverage its resources and promote affordable housing in cities include:

**United States:** Minimizing requirements on new development. Through the Livable Communities Act, the State of Minnesota has aimed to reduce development costs imposed through special fees, minimum floor areas and lot sizes, which can impede the development of new housing. This approach required a high level of cooperation from municipalities, but has created significant savings in development costs in participating cities.

**France:** National-level affordable housing policy. France provides low-income housing at the national level, through the Solidarity and Urban Renewal Law, which requires that 20 percent of housing in all municipalities with a population greater than 3,500 is dedicated to public social housing. Those municipalities that do not meet the requirement pay a fee, which is in turn invested into social housing development.

**UK and the Netherlands:** Non-profit sector housing provision. In the UK and the Netherlands, the non-profit sector has increasingly played a role in the provision of low-income housing. Registered Social Landlords (RSLs) in the UK are non-profit organizations that develop housing partially subsidized by the government. In the Netherlands, non-profit housing associations provide over 99 percent of the low-income housing stock. These associations are financially independent from the government, although the government does play a role in guaranteeing loans for housing improvement by these associations.

**Ireland:** Designating land for affordable housing development. To address the issue of a lack of available land for affordable housing development, the Irish Planning and Development Act (2000), allows local governments to designate up to 20 percent of residentially zoned land for different income levels. This policy intends to ensure the availability of land for different classes of housing, with an emphasis on low-income or social housing.

*Source: Kamal-Chaoui, L. and Sanchez-Reaza, J. (eds.) (2012), "Urban Trends and Policies in OECD Countries," OECD Regional Development Working Papers 2012/01, OECD Publishing.*



## PART 5. FINANCING

**77. This section briefly addresses issues of Metropolitan financing.** It describes the main sources of municipal revenues, reviews the structure of revenues and expenses across cities of different sizes. Given the lack of consistent data, statistical information is used mostly for illustrative purposes.

**78. In the comprehensive literature on Brazilian metropolitan governance, finance of metropolitan bodies or services is rarely addressed.** In general, the discussion revolves around the best form that metropolitan committees could assume or who could mandate policies or investment decisions with an impact at territorial level. However, the definition of funding mechanisms is probably the most important lever to ensure that metropolitan policies and investments will be implemented. At present, some Brazilian MRs have a small Metropolitan Fund financed by the state government and municipalities. While the resources are limited, these Funds have a strategic role to play in promoting a metropolitan agenda and a medium-term shared vision.

**79. The topic of metropolitan financing is beyond the scope of this study but needs to be addressed in a comprehensive fashion.** "Two questions deserve essential attention in building a new model of metropolitan finance: a) inter-governmental cooperation and b) the acceptance of a financing model that welcomes different alternatives in line with the differences across Brazilian metropolitan regions" Rezende (2011). Both would require a flexible but clear set of guidelines to orient the local governments. A point of recognized importance is the constitution of an investment fund defined and supported by sources of different nature, including federal, local, state, private

and donor based. The existence of reliable and predictable financial resources is an essential feature of any metropolitan structure that is supposed to design and implement development projects, including infrastructure and long-term spatial development.

**80. Brazilian municipalities are financed by three main sources: own-source taxes, shared revenues from the federal and state governments, and special grants.** On average, inter-governmental transfers represent more than half of the total municipal revenues, while own revenues account on average less than one third (Ter-Minissian, 2012). Local governments receive both direct transfers from the federal government and transfers from the respective state governments, mostly in the form of a devolution-based sharing of state revenues from the state value-added tax (*Imposto sobre Circulação de Mercadorias e Prestação de Serviços*, ICMS).

**81. The largest sources of own municipal revenues are the tax on the provision of services (ISS, *Imposto sobre Serviços*) and the property tax (*Imposto sobre a Propriedade Predial e Territorial Urbana*, IPTU).** The IPTU's rates are set by each municipality within a 2 to 5 percent range. Local governments can grant exemptions or reductions as a way to attract large enterprises to their jurisdictions. In general, the ISS is an easier tax to collect and politically more accepted than the property tax. The lower performance of the IPTU is due to several factors, including: (i) high share of non-registered properties; (ii) lack of updated information about market values; and (iii) taxpayers' resistance. The IPTU performance varies across municipalities, being better in larger municipalities of the South and South-



eastern regions, which have higher property values and better tax administration capacities, including the use of modern technologies for registration and assessment of cadastral values (Afonso 2010).

**82. The degree of dependence on inter-governmental transfers varies significantly across municipalities.** Small municipalities are on average substantially more dependent on transfers than larger ones, reflecting the nature of the bases of the ISS and IPTU (more buoyant in cities than in small rural communities), the weakness of their tax administrations, and the criteria for horizontal distribution of transfers from the federal government. Large cities, in contrast, collect on average more than 50 percent of their revenues through local taxes (Ter-Minissian, 2012).

**83. The Fund of Municipal Participation (FPM, Fundo de Participação dos Municípios) is the**

**most important mechanism for sharing federal revenues with municipalities.** The Fund is composed of 23.5 percent of revenues from the federal income tax and a tax on industrial products. It is divided into three parts: (i) 10 percent is shared across capital cities (on the basis of population size and inversed based on the state's per capita income); (ii) 86.4 percent is divided among other municipalities applying a coefficient based on population, favoring smaller municipalities; and (iii) 3.6 percent is reserved for large non-capital cities. To prevent the proliferation of small municipalities, the FPM distribution across states has been frozen since 1989, despite the demographic changes that have taken place since. Therefore, the distribution criteria for the FPM puts at a disadvantage the satellite cities surrounding large municipalities, which usually have a large population and limited own revenues. This disadvantage reduces their capacity to provide basic public goods and services (Ter-Minissian, 2012).

**84. The largest component of revenue sharing arrangements is the transfer of 25 percent of state revenues from the state value-added tax (ICMS) to the municipalities.** Three-quarters of these transfers are distributed according to a devolution criteria (i.e. proportionally to the value added originated in the municipality). The remaining quarter is distributed according to other criteria determined by each state, including equity considerations, synergies between municipal and state programs, or mitigation of externalities. The devolution criteria leads to a disproportionate concentration of transfers to local governments that host a large industrial sector. It also promotes fragmentation, as municipalities around industrial establishments can maximize transfers per capita by setting up as individual municipalities (Ter-Minissian, 2012). Studies show that these transfers favor municipalities in the richer South and Southeast regions with smaller populations, higher human development indices, and higher own revenues per capita (Mendes, Miranda and Cosio, 2008). Moreover, the concentration of ICMS transfers is not offset by the distribution of transfers from the FPM.

**85. Municipalities benefit from special grants, which are earmarked transfers to special programs, the most important being those in support of education and health.** To improve the education situation in the country, the 1988 Constitution mandated that at least 18 percent of federal revenues and 25 percent of state and municipal revenues should be devoted to education. It is also established that 60 percent of such spending should go to basic education, and the mechanism used for this purpose is the Fund for the Development of Basic Education (FUNDEB, Fundo de Manutenção e Desenvolvimento da Educação Básica). The resources from the FUNDEB are redistributed

to local governments to finance basic education on the basis of the size and characteristics of the student population. Similarly, with the objective of expanding universal health services, the states are required to devote a minimum of 12 percent of their revenues to health spending, and the municipalities a minimum of 15 percent. Federal transfers to the states and municipalities to finance health services have grown rapidly in recent years, to over 60 percent of total federal health spending. These transfers are partly mandatory and partly discretionary.

**86. One of the problems that explains the inequality in service delivery in metropolitan areas is the low fiscal and institutional capacity of small cities to perform their constitutional responsibilities** (Abrucio 2005 and Arretche 2000). Differences in fiscal capacity are very evident even taking into account the inter-governmental transfers that are mandated by the Constitution<sup>46</sup>. Cities with population below 200,000 accounted for 28 percent of tax revenues (52 percent of total revenues, after transfers); while cities with population above 200,000 accounted for 72 percent of tax revenues (Fernandes 2013). While smaller municipalities depended on transfers, own-source taxes in cities with population above 5 million contributed 40 percent of their total revenue. Table 3 depicts the differences in structure of revenues for São Paulo and Belo Horizonte, which confirms the differences between core and periphery in large metropolitan areas. This persisting difference in fiscal capacity impacts the provision of services and will only disappear with growth, local development and tax reform.

46. Rezende (2011) *Em Busca de um Novo Modelo de Financiamento*, p. 85-86 in Magalhães *As Regiões Metropolitanas no Brasil*, IADB.

Table 3. Structure of Revenues and Spending (percent), Belo Horizonte and São Paulo Metropolitan Regions, 2009

SECTOR	BELO HORIZONTE METRO		SÃO PAULO METRO		TOTAL	
	CORE CITY	SUBURBS	CORE CITY	SUBURBS	CORE CITY	SUBURBS
<b>SOURCE OF REVENUES (%)</b>						
Own source revenues	38	15	49	35	35	19
Shared Rev,	29	32	15	26	25	47
Specific Grants	20	22	25	34	24	22
<b>SOURCE OF SPENDING (%)</b>						
Health and Education	47	53	41	47	65	67
Urban Related	20	21	27	20	17	25

Source: *Observatorio de Metropolis, Arretche, 2011*

**87. The structure of spending across metropolitan areas varies much less than the revenue structure.** On average, 87 percent are current expenditures (40 percent payroll, 3 percent interest, and 44 percent maintenance and operations) with capital expenditures accounting for 13 percent of total. Distribution by functions indicate the large role of education and health (65 percent), urban development (between 10 and 17 percent) and other infrastructure such as housing, transportation and sanitation (Fernandes, 2013). Core cities spend more on transportation, but there are no other significant differences when compared with non-core cities in terms of structure of spending<sup>47</sup>.

**88. There is a consensus that a new model of metropolitan financing should include a system of fiscal equalization to smooth out the differences in tax revenue across federal members, be predictable and flexible, ensure**

**coordination and have an active participation of states and central government** (Rezende 2013). The discussion of a new model of metropolitan financing would imply the revision of the equalization regime based on municipality size towards a regime emphasizing metropolitan regions and realities, as well as rules that would encourage collaboration and the establishment of a metropolitan entity. None is easy or likely in the short run. First, the system is highly complex and rigid. Any changes that would shift the focus of the equalization fund from municipalities to metropolitan entities would require constitutional amendments and all the political discussion that it entails. Second, without a clear mandate and vision, local governments would hardly agree to move into a new situation that will probably lessen their autonomy in terms of fiscal decisions and direct dialogue with the central government. Third, the overall scheme of subnational fi-

47. Arretche (2013), Rezende (2008) and Fernandes (2013).



nance in Brazil is considered in urgent need of reform as it is hurting competitiveness and is unable to carry out its intended equalization functions (Ter-Minassien, 2012). Any new model on metropolitan finance would need to be discussed within a new architecture of the sub-national finance scheme.

**89. The discussion of financing in the metropolitan context needs to go beyond local government own-source revenues; it needs to enter into frameworks of infrastructure financing using private sector resources, corporate financing and donors.** Rezende 2011 offers a very comprehensive description of the fiscal federalism mechanism existing in Brazil and explores different ways and alternatives that

could be considered within a broader review of the existing fiscal federalism framework. Experience in Brazil and around the world provided innovative ways to finance urban infrastructure and service provision. In São Paulo, land value capture mechanisms have been developed and used to extend infrastructure to poorer areas, and PPPs have been used in several sectors. Financing structures need to be studied and suggested to municipalities of different sizes as appropriate. Sharing experiences and helping to structure infrastructure deals could well be the function of MRs or similar agents in charge of training and dissemination of practical experiences.



## PART 6. RECENT DEVELOPMENTS - THE NEW STATUTE OF THE METROPOLIS

**90. Brazil has a long history of metropolitan management, creative experiences and a federal structure that invites the three tiers of government to participate in the governance of metropolitan areas.** While MR agencies need to maintain flexibility to serve the metropolitan needs they serve, some improvement in structure is welcome. On the one hand, there has been a proliferation of MRs in the last ten years. For efficiency purposes, it would be useful for the federal government to establish the criteria that constitute a MR and the participatory mechanisms to ensure coordination among stakeholders. Most of these issues have been contemplated in the new *Statute of the Metropolis*.

### THE STATUTE OF THE METROPOLIS

**91. Following several years of discussion, in January 2015 the Statute of the Metropolis was enacted.** This new law presents an opportunity to review metropolitan issues in Brazil, and improve coordination. It: (i) sets up general principles and guidelines for the planning, management and implementation of metropolitan-related matters of common social interest; (ii) encourages collaboration and partnerships for shared metropolitan management and governance across the various tiers of governments, through existing instruments (such as Public Private Partnerships – PPPs, Consortia, Urban Operations, Cooperation Agreements, Concession Contracts, etc.); (iii) defines arrangements for metropolitan governance<sup>48</sup>; (iv) defers to states, through specific regulating laws, the responsibility of detailing such arrangements; (v) enforces the need to prepare integrated plans for metropolitan de-

48. The arrangements include: (i) an executive branch formed by representatives of the municipalities involved; (ii) a steering committee with decision power, also formed by a representative from civil society; (iii) a public/technical advisory organism; and (iv) an integrated system for fund allocation, reporting and accountability.

velopment<sup>49</sup> at state level, as all as mandates that local and sectoral plans must be coordinated with those. The approval of the law will bring specific responsibilities to the state, federal and local governments.

**92. Under the Statute of the Metropolis, the federal government:** (i) sets out the broad national policy framework for metropolitan areas and overlooks its implementation; (ii) defines strategies to support metropolitan governance including revision of integrated metropolitan plans and/or promotion of collaborative governance such as public consortia; (iii) defines the broad forms of participation of civil society, including the office of the public prosecutor (Ministério Público) as a key guarantor of such consultations; and (iv) establishes a federal system of metropolitan planning and information with the participation of state and local governments.

**93. States continue to be responsible for the creation of metropolitan areas (as determined in the Constitution), and are now obliged to develop integrated plans for metropolitan development.** Specific state laws complementary to the Statute will establish: (i) the guidelines and criteria for MR creation – including city size, density, services to be provided, accountability and instruments for social control; (ii) the detailed metropolitan governance structure (no timeline is set up for this aspect); (iii) tools for integrated planning, including short and medium-term metropolitan plans, funding, and public-private partnerships. The planning process will be coordinated by the metropolitan agencies.

49. The Metropolitan Statute also includes specific provisions related to the integrated development plans – scope, deadline for completion (3 years from the approval of the Law), frequency of needed update (10 years), transparency and public participation.

**94. Cities will articulate their master and land use planning with the integrated state and metropolitan plans.** By Constitution, they will continue to be autonomous and free to enter into any metropolitan arrangement they choose. By the Statute, they will have three years upon the development of the integrated metropolitan plan to adjust their own planning to the demands and directives of it.

## A BRIEF ASSESSMENT

**95. The Statute of the Metropolis aims to encourage better collaboration across tiers of governments that operate in a particular urban area.** The principles are a solid point of departure from the past and reflect the preoccupation of the country to improve service delivery, reduce poverty and accelerate growth. Several points deserve comment:

**96. Under the new statute, states will define clear criteria to create new metropolitan areas.** This will allow comparability among the new entities, avoid a mushrooming of new bodies, and concentrate efforts and energies on institutions with maximum impact. A similar system has been used in Australia and Germany. Australia uses 117 indicators to characterize the metropolitan areas and assess their performance in different areas (Sansom et al, 2012). Germany has defined precise criteria but they are not always used. The MR of Hamburg has been created bottom up from voluntary associations among cities and communes, and so has Dresden MR and Marseille Great Urban Community. The Great Toronto Area has evolved by repeated amalgamations of the City of Toronto and four other large regions rather than by strict criteria. While having a set of criteria to create new entities is useful, these criteria should be flexible and allow the creation of voluntary forms of metropolitan governance.

**97. State governments will prepare integrated urban plans and municipal governments will harmonize their urban master plans with them.** Planning is fundamental to ensure efficient provision of infrastructure as the MR expands and consolidates and to achieve a city density and shape compatible with sustainable growth. Some issues could be important:

- (a) **Land use planning has been an issue in Brazil.** Stringent land regulations have contributed to slum growth in the last 60 years by constraining the response of the formal housing market to expanded demand for shelter (World Bank, 2011). Urban zoning regulations contribute to timely infrastructure and transport oriented development (hence less congestion and less pollution) but urban planning should be dynamic and based on tools to monitor changes in real estate markets. Brazilian cities often have several plans but rarely are they linked to action plans and reflected in the annual budgetary laws. The case of Belo Horizonte is emblematic and a precursor of the vision planted by the Statute of the Metropolis in such as it defines macro-zoning at metropolitan level. This case however also highlights how difficult it is in practice to guarantee alignment with metropolitan level planning and enforcement at municipal level of land use.
- (b) **The most effective metropolitan area plans have been prepared and implemented at the level of large amalgamated cities, including New**



**York, Greater London and Singapore** (see Box 8). These plans share some characteristics. First, the planning agency has a clear mandate and role. The metropolitan plans are binding for city development plans; key parameters such as broad land use and floor area ratio are cascaded down to the local level. Second, the plans are developed within a long-term concept plan (40 years in Singapore, 20 years in New York and London). The concept plan is based on the city vision, population, GDP growth, jobs and high level land use. The concept plan cascades down to a 20 year actionable master plan and a 20 year plot-by-plot city development plan. Integration is ensured through key metropolitan parameters that are binding in land use plans with detailed trans-

portation plans, including peak hour traffic, projects, and finance; affordable housing, education, health and zoning norms. Third, the planning structure is highly respected and supported by qualified people. Urban plans are mandatory and exemptions are exceptional, requiring a public hearing for major exemptions; citizens are key stakeholders in the planning process with many opportunities provided to shape the final plan.

- (c) **While coordination is a high-order objective in metropolitan governance, the requirement for integration of urban plans at the three tiers of government may become too rigid in the case of Brazil to be realistic and useful in the short**

**term.** Plans, while focused on clear goals, need to be flexible and able to adapt to the changing realities. The inter-linked structure of plans across the metropolitan agencies, states and cities may become too heavy and reduce the space that local plans need to adjust to economic changes. There should be a balance between flexibility to plan and coordination among different tiers of government. The encouragement should be for cities in metropolitan areas to identify their needs in land use, connectivity and finance and contribute to a larger plan at state and metropolitan level. Financing availability should be credible to maintain commitment at local level.

- (d) **The law leaves out of the integration all the sectoral plans, which effectively are not to be integrated mandatorily at metropolitan level.** This could create some conflicts moving forward in terms of service delivery coordination and implementation.

**98. The new law operates as a national policy framework for metropolitan areas; however, it does not interfere with the autonomy of states and municipalities.** A national framework is a very useful tool, especially to provide guidelines for long-term vision, zoning decision, and sustainable development. Korea uses a 20-year framework to prevent unnecessary adjustment in city plans. Australia has recently developed a National Urban Plan with similar objectives.

**99. International experience suggests that the role of the central government in metropolitan governance varies a great deal, from little interference in Canada and the United States, to more direct interference in Australia, Brazil, Germany and South Africa.** In Canada, the creation of a Ministry of Cities in 1970 was a short-lived success as the ministry was dissolved within three years due to the opposition of the provinces. Australia has a central ministry and a Council of Australia Governors (including prime ministers, heads of provinces and the president of the municipal association) that review major issues regarding metropolitan development. In Germany, while MRs are the responsibility of the states, the central government established in 2001 the Standing Conference of Ministers, responsible for spatial planning, which is now the main platform for urban development. It is mostly a bottom up strategy to promote city associations, discuss governance issues or execute projects.

**100. Infrastructure financing at metropolitan level is crucial; however, and unfortunately, actual provisions for financial support from the central government were not included in the Statute of the Metropolis.** In Brazil, while the Statute of the Metropolis opens the possibility of financial support from the central government to metropolitan matters, its actual provisions are not so clear about it, as the original article on the creation of an specific Fund for integrated urban development (which could be used to leverage domestic financing, including city own sources, borrowing and PPPs) was vetoed. The reasons brought up by the legislator are the desire to not crystallize resources into a dedicated channel, but to rather work through incentives and existing financing programs. This rationale is understandable, however (i) without such fund, it is

### Box 8. Planning experiences in three metro cities

**Singapore.** Singapore's success to become a world city in less than 60 years was partly due to its urban planning system, under the Urban Redevelopment Authority in charge of executing the land use plans. Concept plans were created in 1971, 1991 and 2001. These plans have been the anchor for the 40-year development strategy and are refreshed every decade using a state of the art GIS. The 2001 concept plan, for example, starts with a target population and cascades down to employment estimates by sector and high-level land use, including green field development, mass rapid transit, and distinct infrastructure projects. Plans are displayed to the public using physical models and planners consider the views of the public before finalizing the content. Singapore uses more than 300 professionals and \$160 million with the planning structure.

**London:** The Greater London Authority (GLA) and individual borough councils share the responsibility for urban planning. The GLA creates the 20-year statutory urban master plan. Local development plans should be in line with these guidelines. London plan starts off with the city's vision and population projections. These projections are translated into broad land use plan and key initiatives in transportation, affordable housing, basic services and environment sustainability. These plans are backed by a financial plan with explicit priorities for financing. GLA also takes care of the design aspects and sustainability; the master plan enlists current and target GHG emissions and a list of supporting activities.

**New York:** New York Department of City Planning, in collaboration with the metropolitan city planning commissions, is responsible for the planning of the city five local governments. NY estimates a population of 9 million people and 4.3 million jobs by 2030. Based on that, the plan provides guidelines for polices and projects for more than 95 activities across six priority areas: land use (including housing and open spaces), water supply, transportation, energy, air pollution and climate change. The plans are discussed with the communities. For example, details are provided in terms of floor area ratio and setback defined for each borough.

*Source: McKinsey Global Institute, India's urban awakening: Building inclusive Cities, sustaining economic growth.*

debatable whether and how states and municipalities will put aside financial resources for the common good, without falling into political standstill; and (ii) international experiences confirm that infrastructure financing is the most powerful incentive for local governments to coordinate actions. Most OECD federal governments have created special funds for urban and metropolitan areas. Canada has the Green

Infrastructure Fund (\$1 billion) and the Municipal Green Fund to provide grants, guarantees and loans for green investments. Australia has Infrastructure Australia created in 2010, and the National Urban Policy published in 2014 after four years of diagnosis, discussion with society (4,500 interviews and active participation), and a set of plans. Sustainability, livelihood, productivity and creativity are among

### Box 9. No metropolitan governments in the US

In the United States the political system and political culture provides no basis for a metropolitan tier of government. The only case of regionalism happens when access to federal aid in sectors like transport requires a metropolitan planning organization. This is the case of the Port Authority of New York and New Jersey. Florida designates regional water management districts. The only two examples of metropolitan government in the US are the Portland Metro and the Minneapolis-St Paul Metropolitan Council. Metropolitan Statistical Regions exist for Census purposes but they have no legal or administrative divisions (Vogel and Imbroscio, 2013).

the 10 major quantified goals of the strategy. In Germany, urban and metropolitan infrastructure is financed by provinces and the federal government. A global fund is available to provide subsidies to regions and states.

**101. The need for improved information on metropolitan and regional economy justifies a targeted effort to compile information, launch comparative analysis investigate the sources of differences in performance of service delivery and economic growth across metropolitan areas.** Brazil has first-rate institutions working on urban issues, ranging from the Ministry of Cities, Federal Universities, IPEA, *Observatório das Metrôpoles*, and several private and public foundations. These institutions could contribute to, as well as benefit from a significant improvement in the knowledge base. Priority should be given to fill the following information gaps.

(a) **Define data and diagnosis** on economic and social patterns of metropolitan areas as input to the longer-term planning and forecasting investment needs. Publish indica-

*tors for MRs assessing their success in improving poverty and promoting growth and job creation. A publication on the State of Brazilian Cities and Metropolitan Areas could be a useful way to share ideas and monitor performance.*

- (b) **Collect data on revenues and expenditures** by metropolitan region and its municipalities, taking into account all sources of spending (federal, state, local and donors) and to give an aggregate picture of resource use in the metropolitan areas.
- (c) **Analyze the effectiveness and efficiency of spending.** This requires the collection and comparison of costs and outcomes of service provision across sectors and metropolitan regions. Such work could help identify the appropriate scale for delivering services efficiently (municipality, metropolitan region, or state).





## PART 7. FINAL OBSERVATIONS

**102. Brazilian MRs can do even better by making use of agglomeration economies, as evidenced by strong inequalities between the core city and the rest of the MR.** MRs represent an important concentration of resources, and overall reflect national growth trends in absolute terms. However, salaries and income have not grown at the same pace as GDP, and inequality has increased as higher salaries and higher skilled jobs have concentrated in the core cities. While service provision has gradually improved, a huge deficit remains that is particularly visible in the metropolitan periphery. Stark disparities exist in terms of income, skilled labor, and service provision (such as housing, transportation and sanitation) within metropolitan regions. Housing stock and slum proliferation have increased, often in peripheral areas with less service provision, and in a fragile environmental setting, a pattern that has contributed to increase commuting times within the MRs.

**103. While strategic in terms of concentrating opportunities of economic development and addressing social deficits, MRs traditionally lack an appropriate institutional framework to guide the planning, management, and finance of their development trajectory<sup>50</sup>.** Metropolitan efforts across levels of government in the past decade have been significant – but yielded insufficient results. Despite a strengthened regulatory framework that guides metropolitan development, renewed metropolitan initiatives on the part of state and local governments, and a substantial increase in the volume of federal resources, progress on metropolitan governance has been limited. Despite the long awaited approval of the City Statute in 2001, the majority of metropolitan

areas are still characterized by disconnected local land use and master planning, providing local and state governments with little or no leverage over local and metropolitan land, real estate markets, and integrated service delivery. Consequently, the economic dynamism that is concentrated in MRs has not translated into proportionally better urban development and housing conditions. Metropolitan areas are still characterized by intense socio-spatial disparities and mismatches between land use, the availability of infrastructure, and the degree of accessibility.

**104. Regional collaboration and metropolitan governance in the wider sense of the term has evolved and the impact that metropolitan structures have had in promoting growth and equity has varied by states and cities.** The analysis of 15 metropolitan regions and the three case studies show how incomes and access to services have changed over time and how important gaps in service provision are still prevalent in many metropolitan areas. Would inequality and access to basic services be improved with a more aggressive metropolitan collaboration? Yes, especially in terms of coordinating and prioritizing policies. However, redistribution implies a conversation on cross subsidization and using taxes from different pools of taxpayers among communities in the metropolitan area.

**105. The autonomous sovereign status enjoyed by Brazilian local governments is not compatible with some forms of metropolitan governance such as amalgamated or two-tier structures.** While these solutions are effective in handling redistribution in the provision of services, they are unlikely to be a reality in

50. Bahl, Linn and Wetzel, 2013

Brazil, as they would require approval of the merged municipalities that would be losing their authority and taxing powers. Amalgamation in Canada and South Africa was possible due to the subordinated role that municipalities have in relation to the states.

**106. In the case of Brazil, the present system of one-tier or jurisdictional fragmentation is likely to continue, with local governments taking care of provision of services at local level, and re-distribution and equity being the function of the central government via national norms and policies.** Voluntary associations have been successful, in line with what has happened around the world. Special purpose agencies and consortia to coordinate transport services and infrastructure, as in the case of São Paulo and Recife, will have an increasing role to play in extending urgent infrastructure and services.

**107. The objective of the new Statute of the Metropolis is to create conditions for an effective collaboration within the MRs.** This legislation reflects the preoccupation of the Brazilian legislators to avoid the proliferation of intermediate metro structures (between states and municipalities) without clear mandates or resources.

**108. International experience shows that most countries do not have a complete and closed framework for metropolitan governments.** Australia is probably the federal country with an apparatus closest to what the Statute of the Metropolis sets for Brazil. A central government with a clear vision, and many inter-linked plans developed at different tiers of governments and oriented by a common 25-year vision prepared by the central government. Australia's framework has been in preparation for about 3 years and it will take time to reveal

how successful it will be. However, most countries have a central office at the central government level to discuss metropolitan issues. In addition, the central government imposes or suggests policies at regional level, and uses funds to promote regional policies.

**109. Planning is also a common feature in most of the metropolitan governments in federal countries.** Medium and long-term planning is very useful to orient efforts towards a common goal and to ensure that development efforts do not change with shorter-term political cycles. Plans are especially important to project the needs in infrastructure and financing associated with demographic projections and economic restructuring, as well as the best way to allocate land across alternative uses including urban transport and public spaces.

**110. The analysis of the Statute of the Metropolis, the experience of metropolitan regions in Brazil and the international experiences, point to a number of priority areas for the short and medium term described in the following sections.**

**111. Short term:**

- (a) **Raise the profile of the metropolitan issue.** The Statute of the Metropolis provides an opportunity to position the metropolitan matters – planning, participation, tools and governance structure – at the forefront of the discussions. It would be important for the discussion to include the identification of key services or inequalities in service delivery at metropolitan level, and extend to include issues of economics, competitiveness, investment climate and comparative advantages, from the



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finance and knowledge industry in São Paulo, to the agro-industrial policy of the São Francisco Valley. Economic development and job creation will be the ultimate indicator of successful metropolitan growth.

(b) **Focus on what has worked.** A critical review of what has been learned with the voluntary collaboration among municipalities is urgent and could bring a great deal of ideas. This analysis could include the motivation for municipal consortia, functions and agreements, financial obligations, agreements on policies, investments or cost sharing, monitoring and resolution of conflict; and impact on cost and coverage of service provision. Consortia that are effective in providing services at metro or regional level could evolve into

wider special purpose agencies, as the Vancouver Metropolitan Authority or Portland Metro Authority. These agencies receive from their members a clear mandate to provide specific services and are funded by user charges.

(c) **Estimate financing needs and strategies in metropolitan areas to mobilize resources.** There is a persisting gap which needs to be filled in the discussion around economic and financing aspects. A multi-source infrastructure fund to leverage investment financing should be considered in the future. This would require defining criteria, terminology, financial partners, and schemes to prepare project finance. The experiences of Metro Washington, Shanghai metro finance, Singapore long-term planning, and Australia National Ur-



ban Plan are relevant experiences, and a deeper study of these could serve as a guide. The experience of São Paulo harnessing land-based revenues to finance low-income areas or to engage in PPPs to finance the metropolitan system could be replicated in other areas. Examples such as ARPEGIO in Madrid and the Dulles Metro Rail in Washington<sup>51</sup> indicate the role that specialized institutions can have in mobilizing finance for metropolitan projects, even in cases where municipalities belong to different states.

(d) ***Instill the need to coordinate land use with transport and housing in all city and state plans and help cities to raise land-based revenues to finance infrastructure and social development.*** Planning visions for transit and land-use integration are crucial, and so is the adequate funding for successful execution. Transit and land-use integration can yield the income needed to expedite and support the process. For example, value capture and joint developments can generate income to help finance the needed infrastructure.

51. The Dulles Corridor Metrorail project aimed at extending the rail by 37 Km to Dulles airport in the Washington DC metropolitan area. Financing has been obtained by voluntary taxes by people that have land around the corridor, grants from the federal government, contribution from the state of Virginia and 40 percent by revenues of the existing toll roads.

**112. Medium term:**

- (a) **Evaluate whether a common framework for all metropolitan regions or flexible structures – like the US and European models – would be more efficient.** The new Statute of the Metropolis opens up the possibility of developing a national framework for the MRs. It is important to understand if the establishment of a common framework or the definition of guidelines for flexible metropolitan structures would be more appropriate in the Brazilian context. The international experience presented show that there is not a rigid framework for metropolitan governance in most countries.
- (b) **Include metropolitan concerns in any revision of fiscal federalism arrangements that may be discussed in the coming years.** The fiscal federalism in Brazil has been a source of debate in recent years. If eventually the government undertakes a revision, it would be appropriate to include metropolitan finance issues into the debate. This could include applying user charges to finance private goods provided by the public sector, rules for access to debt markets, the role of federal guarantees to finance metropolitan projects, and equalization funds.
- (c) **Address sustainability.** Promoting sustainability, reducing GHG emissions, and preparing resilience plans are the focus of the international community dealing with cities and metropolitan areas. Any credible plan to reduce global warming will pass by policy actions at metropolitan or regional level. Transit, density, energy, solid waste, retrofitting, brown fields, etc., will be better

dealt at multi-city level. Build long-term sustainable/green growth plans based on concrete sustainable 25-year plan prepared by selected metropolitan areas. São Paulo and Rio de Janeiro have useful experience given their role in most of the recent initiatives on cities and climate change.

**113. Brazil has offered the world innovative instruments of urban policy, including: TOD in Curitiba, land value-capture instruments in São Paulo, participatory budgeting in Porto Alegre and Belo Horizonte, and (ZEIS) in Recife.** All these tools were invented at city level, were expanded to national level and are reflected as good practices all over the world. In the area of metropolitan management, the challenge is not a technical invention but reaching consensus and collaborating with multiple agents with different short-term goals in a common direction.

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## ANNEX 1. METROPOLITAN MODELS, PROS, CONS AND EXAMPLES

GOVERNANCE MODEL	EXAMPLES
<p><b>1. Jurisdictional Fragmentation (Fragmented one-tier government model)</b></p> <p>General-purpose governments operate in the metropolitan area with independence to choose public services, taxes, user charges and debt financing arrangement. Service delivery is mostly with lower tier of government. Home rule heavy.</p> <p><b>Pros:</b> close and accountable to constituencies</p> <p><b>Cons:</b> may prevent economies of scale; too small to enable coordination; may augment regional differences in welfare.</p>	<p><b>United States:</b> the municipalities and special districts provide services.</p> <p><b>Copenhagen:</b> 45 municipalities in charge of service delivery and taxation. National capital region has health responsibilities but no tax authority.</p> <p><b>Paris:</b> 8 million people; 80 municipalities; public companies responsible for service provision</p> <p><b>Stockholm:</b> 65 municipalities and 5 counties.</p> <p><b>Mexico City:</b> metropolitan area includes the Federal District and its 16 delegations. The Federal District has the functions of any district but has no taxing powers.</p> <p><b>São Paulo:</b> 18 million people; includes 39 municipal governments without overlapping metropolitan government. Coordination is attempted by agreements among municipalities and state government.</p>

GOVERNANCE MODEL	EXAMPLES
<p><b>2. Amalgamated (One-tier consolidated government model)</b></p> <p>Area wide metropolitan government provides general services. In theory, the metro government should be elected and have powers to regulate services and financing.</p> <p><b>Pros:</b> Greater coordination &amp; equalization.</p> <p><b>Cons:</b> it reduces the power of local constituencies to influence the local budget, often brings inter-governmental conflict with other levels of governance.</p>	<p><b>Toronto:</b> Single metro government that provides all kinds of services. The province established Greater Toronto Services Board to oversee regional transit.</p> <p><b>Tokyo:</b> 12 million people. Below the metropolitan level there are 23 special wards, 26 cities, five towns and one village. The wards carry out service delivery delegated by Tokyo metro government.</p> <p><b>Cape Town:</b> amalgamated 61 LGs local governments to guarantee more equitable services. Provides water, sewerage and drainage services. Social services shared with province.</p> <p><b>Istanbul:</b> (73 local governments) – local government must transfer 35 percent of their resources to the metropolitan region to finance its services. In addition, 10 percent are transferred to the metro authority to finance transport investment.</p>
<p><b>3. Two-tier government model</b></p> <p>Upper-tier provides regional services to promote efficiency (e.g. transportation and solid waste disposal); lower tiers provide local services.</p> <p><b>Pros:</b> helps finding the balance between efficiency and equity, and accountability.</p> <p><b>Cons:</b> duplication of efforts may result in higher costs; need for coordination may lead to delays and inefficiencies.</p>	<p><b>Community of Madrid:</b> Community of Madrid with 179 municipalities and extensive powers.</p> <p><b>Greater London Authority:</b> created in 1999 as senior level of governments. Mayor elected. Responsibility of transport, economic development, land use planning, environmental protection; 80 percent budget spent on transport; 63 percent financed by central government grants, 20 percent user charges and 10 percent property tax. The 23 independent boroughs provide education, health and other services.</p>

GOVERNANCE MODEL	EXAMPLES
<p><b>4. Special purpose agencies</b></p> <p>Service delivery is the responsibility of a separate public company or state agency.</p> <p><b>Pros:</b> Firm can run at efficient levels, pay better to its staff, and can make use of debt finance.</p> <p><b>Cons:</b> accountability to the local government is weakened although municipalities can have representatives in the governance bodies.</p>	<p><b>Copenhagen Regional Transportation:</b> coordinating body is a joint regional government/municipal agency.</p> <p><b>Great Vancouver Regional District:</b> consolidates all the functions provided by special districts – solid waste, water, and capital expenditures. Finance comes from user charges. Municipalities are represented.</p> <p><b>Water boards in the Randstad (Netherlands):</b> responsible for flood control, water quality, and wastewater treatment. Authorities democratically elected.</p> <p><b>Lausanne and Stockholm:</b> city-owned companies provide services in housing, real estate management, port operations and water utilities. Profits go to the city.</p> <p><b>Bogota:</b> a special agency takes care of the metro transportation. Operations fully financed by user charges and a surcharge in the gasoline tax.</p>
<p><b>5. Voluntary Cooperation</b></p> <p>Voluntary cooperation between local governments to establish an area-wide body with no permanent, independent institutional status. Common model in regions where home rule is important.</p> <p><b>Pros:</b> Easy to establish, respond to the needs of the local governments, have flexibility.</p> <p><b>Cons:</b> May lack legal approval and decisions are not binding. Brazil consortia are a good model.</p>	<p><b>Stockholm:</b> several mechanisms from federation to joint provision of services.</p> <p><b>Metropolitan Vancouver:</b> 21 municipalities (see above). Created in 1967. Member municipalities are free to leave the arrangement</p> <p><b>Marseille:</b> communities around Marseille formed a special entity with 11 municipalities</p> <p><b>Bologna:</b> 48 municipalities signed the Accordo per la Città Metropolitana (ACM) that includes the mayors and is chaired by the governor.</p> <p><b>São Paulo:</b> Greater ABC was formed bottom up by 6 mayors to deal with the impact that the decline of the automotive industry had on employment and income levels.</p>

Source: Bahl, R. (2013), Slack (2007)

## ANNEX 2. INFORMATION OF SELECTED METROPOLITAN AREAS

TABLE A2- 1: POPULATION RATE INCREASES IN MRS/RIDE (2000–2010)

REGION OF BRAZIL	MR	STATE	POPULATION (2000)	POPULATION (2010)	POPULATION GROWTH 2000–2010 (%)	AVERAGE ANNUAL POPULATION GROWTH (%)
<i>North</i>	Belém	Pará	1.795.536	2.101.883	17,1	2,8
	Manaus	Amazonas	1.645.832	2.106.322	28,0	2,1
<i>Northeast</i>	Fortaleza	Ceará	2.984.689	3.615.767	21,1	1,1
	Recife	Pernambuco	3.337.565	3.690.547	10,6	1,8
	Salvador	Bahia	3.021.572	3.573.973	18,3	8,1
<i>Center-West</i>	Brasília/DF	RIDE-DF	2.051.146	3.717.728	81,3	2,5
	Goiânia	Goiás	1.743.297	2.173.141	24,7	2,4
<i>Southeast</i>	Belo Horizonte	Minas Gerais	4.349.425	5.414.701	24,5	2,0
	Campinas	São Paulo	2.338.148	2.797.137	19,6	0,9
	Rio de Janeiro	Rio de Janeiro	10.894.156	11.835.708	8,6	1,0
	São Paulo	São Paulo	17.878.703	19.683.975	10,1	1,7
	Vitória	Espírito Santo	1.438.596	1.687.704	17,3	1,6
<i>South</i>	Curitiba	Paraná	2.726.556	3.174.201	16,4	2,4
	Florianópolis	Santa Catarina	816.315	1.012.233	24,0	0,6
		Rio Grande do Sul	3.718.778	3.958.985	6,5	2,8

Source: IBGE (2000, 2010)

TABLE A2- 2: CHARACTERISTICS OF MRS/RIDE COVERED IN THIS WORK

REGION OF BRAZIL	MR/RIDE	AREA OF MR/RIDE (KM2)	NO. OF METROPOLITAN MUNICIPALITIES	PERCENT OF METROPOLITAN POPULATION IN CAPITAL CITY	NO. OF MUNICIPALITIES WHERE 80 PERCENT OF POPULATION LIVES
<i>North</i>	Belém	2.537	5	68,2	2
	Manaus	101.475	8	85,6	1
<i>Northeast</i>	Fortaleza	5.795	15	67,8	3
	Recife	2.774	14	41,7	5
	Salvador	4.354	13	74,9	2
<i>Center-West</i>	Brasília/DF	55.402	23	69,0	4
	Goiânia	7.315	20	59,9	2
<i>Southeast</i>	Belo Horizonte	14.420	34	48,6	5
	Campinas	3.645	19	38,6	15
	Rio de Janeiro	5.327	19	53,4	5
	São Paulo	7.947	39	57,2	8
	Vitória	2.331	9	19,4	4
<i>South</i>	Curitiba	15.419	16	55,2	6
	Florianópolis	7.466	22	41,6	4
	Porto Alegre	9.803	32	35,4	10

Source: IBGE (2010)

TABLE A2- 3: 2010 GDP AND INCOME CONSIDERATIONS OF MRS/RIDE COVERED IN THIS WORK

REGION OF BRAZIL	MR/RIDE	GDP OF MR (IN R\$ 1,000)	GDP PER CAPITA (IN R\$ 1.00)	AVERAGE ANNUAL NOMINAL GROWTH RATE GDP PER CAPITA 2000-2010 (%)	AVERAGE NOMINAL INCOME (IN R\$ 1.00)	STANDARD DEVIATION OF INCOME
<i>North</i>	Belém	23.272.889,91	11.072,40	13,8	997,65	307,1
	Manaus	51.396.052,61	24.400,85	14,7	939,09	283,8
<i>Northeast</i>	Fortaleza	50.605.704,49	13.995,84	12,4	757,56	253,6
	Recife	61.443.178,05	16.648,80	11,4	956,72	352,3
	Salvador	75.605.692,03	21.154,52	11,6	1.072,05	307,4
<i>Center-West</i>	Brasília/DF	160.213.432,06	43.094,45	13,2	1.113,91	416,7
	Goiânia	35.970.632,66	16.552,37	10,9	1.070,50	267,3
<i>Southeast</i>	Belo Horizonte	120.833.976,49	22.315,91	12,9	1.141,16	448,9
	Campinas	98.485.073,81	35.209,24	9,8	1.675,17	404,0
	Rio de Janeiro	275.189.465,11	23.250,78	9,6	1.317,32	566,7
	São Paulo	701.848.590,74	35.655,84	10,5	1.510,48	574,9
	Vitória	51.867.295,93	30.732,46	12,0	1.559,62	678,8
<i>South</i>	Curitiba	94.994.579,70	29.927,08	12,6	1.130,10	331,3
	Florianópolis	18.718.092,08	18.491,88	11,2	1.488,81	440,5
		111.653.655,67	28.202,60	10,5	1.287,95	329,7

Source: IBGE (2010)

TABLE A2- 4: HOUSEHOLDS WITH ACCESS TO BASIC SERVICES (PERCENT)

REGION OF BRAZIL/ MR / MUNICIPALITY	ACCESS TO PIPED WATER (2010)	ACCESS TO DIRECT SOLID WASTE COLLECTION (2010)	ACCESS TO BATHROOM (2010)	ACESSO A TRATAMENTO DE ESGOTO			HOUSEHOLDS IN SUBNORMAL AGGLOMERATES (2010)
				ACCESS TO GENERAL NETWORK	USE OF SEPTIC TANK	USE OF OTHER DRAIN	
<b>North</b>							
Belém	58,8	68,7	97,8	9,5	21,3	69,3	32,2
Manaus	57,8	53,3	95,4	10,8	14,1	74,9	7,5
<b>Northeast</b>							
Fortaleza	70,0	63,7	97,1	21,6	12,8	65,6	3,8
Recife	80,7	80,0	98,2	28,0	15,1	56,9	17,3
Salvador	90,7	72,5	97,9	56,0	12,0	32,0	6,9
<b>Center-West</b>							
Brasília/DF	72,5	72,0	98,9	20,1	16,3	63,4	0,3
Goiânia	74,9	83,9	100,0	14,2	16,5	69,4	0,0
<b>Southeast</b>							
Belo Horizonte	87,1	86,7	99,8	60,0	6,7	33,3	2,6
Campinas	92,3	95,7	100,0	81,5	8,1	10,4	0,9
Rio de Janeiro	69,7	89,1	99,9	66,5	12,2	21,3	6,3
São Paulo	89,8	93,1	100,0	69,4	12,8	17,8	4,7
Vitória	93,3	91,0	100,0	69,3	6,0	24,4	9,3
<b>South</b>							
Curitiba	77,0	78,3	98,8	31,0	30,3	38,6	1,3
Florianópolis	74,1	87,8	100,0	21,3	58,8	19,9	0,8
Porto Alegre	69,5	93,9	99,7	48,1	36,7	15,2	1,2

Source: IBGE (2010)

**TABLE A2- 5: PERCENTAGE OF COMMUTES GREATER AND LESS THAN ONE HOUR ACROSS THE 15 MRS**

REGION OF BRAZIL	METROPOLITAN REGION/RIDE	1 HOUR OR LESS	MORE THAN 1 HOUR
<i>North</i>	Belém	86,1	13,9
	Manaus	83,9	16,1
<i>Northeast</i>	Fortaleza	88,1	11,9
	Recife	83,3	16,7
	Salvador	80,4	19,6
<i>Center-West</i>	Brasília/DF	80,7	19,3
	Goiânia	87,6	12,4
<i>Southeast</i>	Belo Horizonte	80,0	20,0
	Campinas	90,6	9,4
	Rio de Janeiro	71,4	28,6
	São Paulo	75,0	25,0
	Vitória	85,0	15,0
<i>South</i>	Curitiba	86,1	13,9
	Florianópolis	92,0	8,0
		88,7	11,3

Source: IBGE (2010)

## ANNEX 3. PROFILES OF 15 METROPOLITAN REGIONS

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