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City Profile

Medellin

Abstract

After being known as the ‘murder capital of the world’ in the 1990s, Medellín has pioneered innovative forms of city planning and management and was acclaimed the most innovative city in the world by the Urban Land Institute (ULI) in 2013. Hosting the World Urban Forum in 2014 allowed it to showcase its approach, key elements of which have been: creation of innovative transport infrastructure linking poorer peripheral districts to the city centre; culture-led regeneration; strong support of local development from the local business sector; and a successful municipally-owned utilities company. However, the city is spreading outwards without services and employment being provided; new low-income developments are replicating high-rise models which failed worldwide; there is limited intervention in the existing informal areas, many being in highly vulnerable locations where the level of risk is likely to increase with climate change; development has little regard for topography, ecological and environmental considerations; investment in accessible and good quality public space is restricted to some areas; the quality of the public realm does not always support health and wellbeing of the ageing population. This paper explores the institutional and socio-economic context in which Medellín has achieved the internationally recognized status of an ‘innovative city’. It questions to what extent social equity, environmental sustainability and citizen empowerment have been promoted as per the ULI claims when it conferred the prize. The paper queries the extent to which ‘urban innovation’ is happening in Medellín, which has considerable implications given its recently found role as a ‘model’ city in Latin America and beyond.

Location and physical assets/constraints and demographics

Medellín is the capital of the Department of Antioquia and the second largest city in Colombia. The city extends North-South for 14 kilometres in the lush Aburrá valley contained within two mountain ranges. At its maximum, the valley containing the city is 10 kilometres wide with 1km height difference between the highest point and its lowest. This results in a very steep topography and a city that is not only surrounded by but also embedded within its mountain range. Adding to its complexity, river Medellín runs the length of the city along the valley, fed by ample sources of water that run down the mountain range, most notably the Santa Elena and La Iguana streams (Alcaldía de Medellín POT 2014:5). The confluence of these three waterways leads to more than 100 ravines running down very steep hillsides. The Río Medellín constitutes the main hydrographic source of the Aburrá Valley, making it a natural drainage for the Municipality of Medellín.

Medellín is also the capital of the Metropolitan region of Aburrá Valley (Área Metropolitana del Valle de Aburrá) **Figure 1**. This is a political and administrative region that unites 10 municipalities of the sub-region: Caldas, La Estrella, Sabaneta, Envigado, Itagüí, Bello, Copacabana, Girardota, Barbosa and Medellín. According to the national census in 2005, the city had 2.4 million inhabitants but the overall metropolitan region reaches up to 3.3 million (UN HABITAT, 2010:2).

The municipality of Medellín consists of both urban and rural areas. The rural area is divided into 5 *corregimientos* (areas with population below that of a municipality), which are further divided into *veredas* (similar to a hamlet). Altogether there are 54 ‘hamlets’ of rural land. The urban part of the municipality is divided differently. There are six large *zonas* (zones), which between them hold 16 *comunas* (comunes). Comunes are subsequently divided into *barrios* (neighbourhoods), of which there are 249 in total.

Figure 1 Aburra Valley. *Source:* the authors

Economic, social and environmental conditions and issues

Housing areas and neighbourhoods are categorised by strata or bands for the purposes of taxation on public services. This is regulated by Colombian office for national statistics called 'Departamento Administrativo Nacional de Estadística' (DANE). Although strata are a device used for real estate taxation, it is commonly used, as DANE states, as a means to deal with 'socioeconomic stratification' within a city (Dane, 2017). The method for categorising areas is based on a real-estate classification system to differentially identify the taxation due for public services and to allocate subsidies and collect contributions in the said area. The bands used by DANE range from 1-6, with Stratum 6 being the highest rateable real-estate. The distribution of strata in the city is shown in

Figure 2 below. The percentage of the population living in each strata is presented in **Table 1**.

Stratum 1 = 12.62%

Stratum 2 = 37.03%

Stratum 3 = 29.64%

Stratum 4 = 9.96%

Stratum 5 = 6.82%

Stratum 6 = 3.93%

Table 1 Percentage of population living in each strata in Medellin. *Source:* UN HABITAT 2010, page 1

Figure 2 Strata for real-estate taxation on public services by Comunes and Neighbourhoods for the municipality of Medellín, *Source:* Adapted by Author from Calvin Ellis (2014), pp 23

The 2005 population census show the highest rated real-estate property is in the Southeast of Medellín, where a higher level of college school attendance is also registered. Lower-rated real-estate coincides where there is also a higher rate of unemployment and lower college attendance. This dominates the Northeast and the North-West of the city. The unemployment distribution reflects how the fringe of the city is mostly a belt of informal settlements on the higher folds of the mountain ranges. The spatial distribution of population thus follows a clear pattern. The further away from the river and the higher up the mountain, the more inadequate living conditions are. A north-south divide is also visible, with a more prosperous area concentrated south of the city.

Until the 1990s public transport was expensive and had been 'hastily put together by savvy businessmen (among them city council members) and poorly regulated by local and national authorities' (Martin and Martin, 2015:55). Social mobility had thus many obstacles because the local population of these neighbourhoods relied on transport to find and maintain employment. On the other hand, the informality of these neighbourhoods meant community links were particularly strong and dweller associations (Juntas de Acción Comunal) were created in their early stages to enable, champion and facilitate their construction. Improving social mobility through improved and innovative transport was one of the key initiatives taken by recent city administrations, as is seen in more detail later.

The low-income neighbourhoods higher up on the mountain are highly vulnerable to landslides and flash-floods, with the level of risk likely to increase with climate change. Generally, government-sanctioned intervention has been focused to land titling, with limited though highly visible improvement to services and public space upgrading and also limited support for home improvement. Larger – less tangible – questions of mediating climate change or preventing environmental disasters have yet to be prioritised (UN-Habitat 2003).

In 2015 it is estimated that 50% of the population in the Municipality of Medellín lives in accommodation financed through a self-help process. One result of informal housing is that public space is 'scarce and of low quality in Medellín's neighbourhoods and even more so as they become denser....leaving only the street for social gathering and open air' (Martin and Martin, 2015:55). Gilbert (2014) estimates that 50% of the Colombian population lives in owner-occupied housing. This ranges from very 'luxurious to the most rudimentary of shacks' (Gilbert, 2014: 256-267). The luxurious housing is generally designed to high standards and owned through a well-developed mortgage system. This housing tends to be in gated developments, or in buildings policed through private security firms, as is evident in particular in the southern part of Medellín. However, private formal housing finance does not reach the less affluent housing. Instead, the less affluent formal areas provide housing through government subsidies to purchase social housing but the housing is small and relatively basic – a 'flagship' example of this is Medellín is Pajarito, on the western fringe of the city (Gilbert, 2014: 256).

So how did the current extent and characteristics of the city of Medellín come about? The next section describes the historical development of Medellín and the evolution of its urban form. This is followed by a section focusing on planning policy, structures and initiatives over the last 25 years.

Summary historical development and urban form characteristics

Medellín was founded in 1675 as a gold-mining town and trading centre. Its spatial origins are similar to most Spanish colonial cities of the 16th century where a grid system of orthogonal streets radiate from a central plaza. Despite its origins as a small, merchant town nested amongst the mountains and with no obvious port for trading, Medellín has consistently been an important force for national economy and politics. It has undergone significant industrial change as well as socio-political upheaval. Forrest Hylton (2007: 72) explains this transformation as follows:

Founded as a gold-mining town and trading centre in 1675, Medellín emerged as the region's commercial capital by the late 18th century; its merchants profiting from the export of slave-mined gold and the long-distance overland trade in cheap imported commodities. In the 1880s the region became the epi-centre of the new coffee boom, tying Medellín more closely to its rural hinterland: the city's merchant bankers controlled the credit, pricing, distribution and transportation of the crop, while coffee-growing small-holders colonized the Andean uplands. These paisas—'countrymen': the Antioquians' name for themselves—were united by a tenacious regional-chauvinist ideology: hard-working, light-skinned Catholic conservatives, identified against the 'lazy' and undisciplined indigenous and Afro-Colombians in the south. (Hylton 2007: 72-73)

Conservative politics, entrepreneurship, industrial paternalism, and Catholicism are well-known descriptors of the city (Ellis 2014, Hylton 2007). This is evident through the idiosyncratic relationship that the city fostered with private companies as it entered a period of industrialisation. From as

early as the 1920s, private companies became a unique public-private enabler of large-scale projects. One such example is the 'Society of Public Improvement' (known as SMP¹), a private enterprise with a 'civic character' founded in 1899, whose mission was to champion the spatial and cultural development of the city. Historically, the City Council has absorbed many of its functions. The SMP currently manages the Zoológico Santafé (ZOO) and uses this as a vehicle to promote research and education in sustainable development. In 1913, it created the Fine Arts Institute (IBA) with an aim to develop outreach educational programmes aimed at low-income groups.

In 1910 the SMP held an open competition to design the 'Plan Medellín Futuro' (**Figure 3**). This was a guide that established some clear ideas about the city's future urban growth (Espinal Pérez and Ramirez Brouchoud, 2006:41). Carlos Restrepo's winning design became a legal decree. Any new building or refurbishment had to occur within the lines of the Plan Futuro. The plan presented the future city as a 'quadrilateral' demarcated by wide avenues and populated by trees. These avenues were intended to create a clear definition between urban and rural, aiming to address the fact that the city's population increased six times from almost 60,000 inhabitants in 1905 to over 350,000 in 1951. Each of the quadrilateral's four corners would have public parks and public spaces, of which two were identified as: the 'Centenario' and the 'Ladera'. For aesthetic and hygienic reasons, Restrepo suggested that existing vacant lots at the North of the city should be designated as a park, inspired by his experience of New York's Central Park.

Figure 3 Plan Medellín Futuro 1913 by Eng. Jorge Rodríguez. **Source:** Adapted from Uribe Restrepo, 1981. P.235

During this period Medellín was undergoing industrialisation. As with other western countries faced with similar processes, Medellín witnessed a large rural to urban migration and the city began to grow uncontrollably. Unlike other western countries, Colombia has been hostage to an intermittent internal war that has flared up several times during the twentieth century leading to three key waves of internal displacement which placed additional pressure on large cities in the country, particularly Medellín. Its catalyst was the notorious War of a Thousand Days (La Guerra de Mil Días) that occurred between 1899-1903 and resulted in the emergence of the Conservative party. This created the 'first wave of forced migration' and even though the war is thoroughly documented in historical archives (Rueda 2000, Mazuca and Robinson 2006, Demarest 2001) there is little reliable data quantifying the number of deaths and internally displaced people (Rueda 2000:4). The second wave was between 1946-1957, with bipartisan violence between the Liberals and Conservatives that led to an estimated death count of 200,000-300,00 and forced migration of 2 million people, which Rueda (2000:4) points out was equivalent to a quarter of the national population. Lastly, the third wave – a consequence of continued political violence – occurred between 1984-1999 leading to 1.7million people being forcefully displaced from their homes (Rueda 2000:5).

Internal migration throughout the twentieth century has been mainly of displaced farmers and peasants who moved to the city as poor or low-income residents, thus settling informally. By the end of the 20th century, it was estimated that 50% of residents had arrived to Medellín as Internal Displaced Persons (IDPs) (UN Habitat: 2005). Critically, this indicates that urban migration was not only *towards* new jobs in the large city, as is the case in many cities in Latin America, but also *away* from the violence endured in the countryside.

¹ SMP, accessed online: <http://www.smp-medellin.org/>

1950s-1970s: Industrialisation and the modern city

A combination of the growing industrialisation in Medellín, and its unique model for procuring public projects through private companies, gained its reputation as a capitalist paradise according to *Life* magazine in 1947 (Hylton, 2007: 75). By 1950 Medellín became 'the second largest in the country, and a regional and national centre of textile manufacturing, energy production, and exporter of coffee and other food products' (Ellis, 2004:19).

In this context, in 1955, the City Council assigned the management of four different utilities (energy, public water supply, wastewater infrastructure and telephone services) to a newly formed 'Public Companies of Medellín' (known as EPM).

In 1989 EPM added environmental management to its mission statement. As of 1998, EPM was transformed into an industrial and commercial public company belonging to the City Council. Its annual contribution has the sole objective of re-investment in social welfare. EPM is one of the biggest regional employers and was selected in 1999 by the national newspaper, *El Tiempo*, as the best company in Colombia of the 20th century. As an institution it makes a central contribution to the finances of the municipality of Medellín, and by extension to those of the Metropolitan Area. In the Corporate Annual Governance Reports, EPM declares it transfers a surplus of between US\$300 and 400 million every year to the Municipality (EPM, 2017). Within the context of cities in the Global South this is quite unique because it partly allows the municipal government to innovate and invest in infrastructure projects and other programmes in a bid to foster development and arguably reduce socio-economic inequalities.

In addition to EPM, in 1964 'Various Companies for the Municipality of Medellín' (Empresas Varias Municipales de Medellín known as EVM) was funded: a semi-public company that manages a variety of services including market squares; livestock auctions; city abattoirs; mass-transport systems; garbage collection; city street-cleaning and collection, transport and disposal of solid wastes.

In 1947 a significant national law forced urban areas to create a Plan Director (City Master Plan) and establish municipal planning departments. The Urban Law (Ley de Reforma Urbana) was the bedrock of subsequent urban developments in Medellín. In 1950 Spanish architect Jose Luis Sert and the German town planner Paul Lester Wiener produced a new masterplan, known as 'Plan Piloto' (1950), that would supersede the 1913 Plan Medellín Futuro. Sert and Wiener introduced modernist ideas of city-planning, highly influenced by the European Athens Charter of CIAM. This resulted in functions being separated throughout Medellín and multi-housing built in superblocks (Martin and Martin, 2015:47). This plan was considered to be unrealistic and utopian, perhaps due to the controversial past experiences of Sert and Wiener in Brazil and Perú. The plan established the land use for the city classifying areas according to modernist ideals: housing, work, recreation and circulation and the later added 'civic centre' (Schnitter, 2003).² However, internal migration deeply affected how the city later developed. The migrant population occupied undeveloped areas such as the hillsides, which were not earmarked for priority development. Although the municipality tried to include new neighbourhoods in the existing city grid, topographical conditions and waterways presented obstacles and help to explain the existing irregular morphology of the metropolitan hillside areas of Medellín (Melo, 1997). The growth of informal settlements and environmental decline also characterised this era.

² The fifth urban function, The Civic Core, was not stipulated in the original version of the Charter, it only emerged as a result of the CIAM's experience in Latin America

1970s-1990s Era of Change

The 1970s-1990s witnessed a surge in informal land development, following distinct patterns within the range of forms of land occupation in Latin America initially described by Turner as 'housing by people' (1967, 1968, 1976), and more recently labelled by Martin and Martin (2015) as Do-It-Yourself (DIY) urbanism. Since the 1950s the demand for housing increases due to the demands emerging from a new internal migration wave caused by violence, with the growth rate of the city reaching 6% (Coupe, 1993). In this period, informal areas, which contributed to dispersed growth outside the defined city's boundary, occupied geographically fragile and complex areas, containing 50% of the population (PRIMED, 1996). In Medellín, the two key forms of informal land development, which began in the 1940s, were: (1) the 'pirate development' (*urbanización pirata*), where the landowner illegally subdivides the land into plots and sells them, defining blocks and public spaces, but without complying with planning regulations nor providing the required infrastructure (Coupé, 1993); and (2) the land invasion (*tugurio*), where people built their own shacks and informally built houses with no official subdivision or infrastructure (González Escobar, 2011). Duque (2013) explains most DIY urbanism has been built on land classified as inadequate urban territory. This is specifically visible in both in the municipality and in the wider metropolitan area of Medellín where informal housing is built on land with a greater pitch/angle than 25% (2013:46). The implications of this housing built on inadequate land is twofold. Firstly, it creates technical difficulty for the delivery of public infrastructure such as water provision and road network. Secondly, there is real geographic danger of subsidence, seismic faults, and natural disasters (Duque 2013: 45).

The third wave of national violence mentioned previously occurring between 1984-1999, is arguably the one that affected the city of Medellín the most (**Figure 4**). This era is the most violent in Medellín's history as Pablo Escobar and the Medellín Cartel's activities were at their peak, taking over the city with a network of 'sicarios' operating on their behalf. 'Sicarios' can be translated as hitmen, but in the context of Medellín, these also include paramilitaries, guerrillas and urban militia with different ideologies and operating strategies (Jaramillo 2015:14). Some attribute the success of city development after the 1990s to a reaction to the atrocities of the 1980s. By the 1990s, the local population had become psychologically willing for a change in governance and were in physical need of neighbourhood renewal and improvement. Castro and Echeverri (2011) interpret violence as one of the reasons why Medellín was forced to grow in an unplanned manner to accommodate formal and informal residents (additional to the reasons that have brought about extensive informal development elsewhere throughout Latin America) and see planning interventions as a way of alleviating, or addressing this phenomenon.

Figure 4 Homicide rates in the municipality of Medellín per year **Source:** Medical Examiner's Office, Published online <http://colombiareports.com/medellin-violence-statistics/>

However, though Medellín was seen locally and nationally as a place of urban conflict, urban growth and responses to this were also nationwide phenomena. Political shifts such as the decentralisation of national government allowing cities to elect their own mayor (1988), the Urban Reform Law (1989) and the introduction of the Urban Land Use Plan (POT), allowed Medellín to begin a process of new political urban reform, which was linked to a drop in violence (see Figure 1). In the early 1990s an emergency act was established by National Government to counteract accumulated years of violence that had led to a loss of 'value for life' (Fernández Correo, found online: viva.org.co)³ in the city. An emergency council was set up called 'Consejería Presidencial para Medellín y su Área

³ Viva la Ciudadanía Foundation : <http://viva.org.co/cajavirtual/svc0174/articulo0008.pdf>

Metropolitana' (Presidential Council for Medellín and its Metropolitan Areas). The council was integrated by a group of experts whose remit was to develop a programme of research and public consultation for the discussion of alternatives and strategies for the future of the city in order to reconstitute the social fabric in crisis and at the same time control unplanned growth.

This Presidential Council involved a series of meetings which included University professors, political leaders and community representatives over a series of thematic conferences on the city of Medellín. These led to the creation of the Strategic Plan for Medellín and its Metropolitan Area developed between 1995-1997 with a view to 2015. The repercussions of this programme catalysed an ideological shift that influenced planning practice from here onwards. We turn to a more detailed analysis of these recent policy developments next.

Critical review of current policy, planning structures and initiatives

Inflection Point: a New National Local Government and Planning Framework

After much debate and negotiation between public bodies and private interests, in 1989 there was a fundamental change to the original 1947 Urban Reform Law (URL), linked to all-encompassing national constitutional change. The emerging law declared those municipalities with 100,000 inhabitants or more needed to formulate an Urban Land Use Development Plan, which is known as the Plano de Ordenamiento Territorial (POT). The POT is understood nationally as a technical, normative and political tool to aid local planning. It intends to coordinate and control urban growth at short, medium, and long term – and to ensure a better balance of 'benefits and charges' for housing developers.

Since the 1989 Urban Reform Law became the base for subsequent planning developments, catalysing a raft of institutional shifts, planning tools, spatial guidelines and funding mechanisms witnessed throughout the 1990s. According to Echeverría (1991), the URL lacked clarity in its conceptual definitions. This proved to be a limitation of the act because throughout the decision-making process, there was limited criteria for balancing public and private interests. Secondly it didn't recognise the value of participative planning where local residents and communities can affect how local plans are formulated. Thirdly, there was 'little scope for new resources to implement municipal plans' (ibid: 112) because the URL did not provide a financial structure. However, the Urban Reform Law aimed to devolve power to local government and forced cities to write their own land use plans (POTs). This was a major milestone in the history of urban planning in Colombia, including Medellín, which approved its first POT in 1999.

The late 1990s witnessed a shift from a highly centralised administration to devolution of powers aimed at modernising and democratising local government. Key authors (Ortiz 2012; Echeverría 2009; González Escobar 2010; Dávila 2013) identify that the shift was enabled by two different but simultaneous changes. On the one hand is a policy driver: the legislative and Constitutional change of the 1990s was fundamental for a new spatial planning practice because the land use plan (POT) emerged from this shift. It subsequently led to new planning instruments, such as the 'Partial Plan' (*Plan Parcial*) and the Integral Urban Programme (PUI) that were designed to deliver the POT and have been key tools in recent developments in Medellín. The '*Plan Parcial*' defines and classifies land uses and addresses the planning strategies for development in a specific area of the city. PUIs were later introduced in connection with the city's investment in major infrastructures and high-quality buildings, including new cultural and education facilities, the improvement of public spaces and housing. Secondly there is a procurement driver: the formal initiation of funding large-scale projects through a private-public partnership built on (and provided a framework for) the historic tendency

for private companies and quasi-public institutions to deliver urban projects. However, the slum upgrading programme PRIMED, which we turn to next, pre-dated the implementation of these initiatives in Medellín.

Medellín's first major Slum Upgrading Programme (*Programa Integral de Mejoramiento de Barrios Subnormales* – PRIMED, 1992-1996)

Amongst the proposals of the Presidential Council in the early 1990s was the creation of 'Nuclei of Citizen Life' (Nucleos de Vida Ciudadana) and 'Houses for the Youth' ('Casas para la Juventud') in some of the poorer sectors of the city. The ideology behind these proposals stems from a very clear aim to make 'security and liveability decisive features of urban life to guarantee governability and make a concerted, visible, effort to find alternative solutions for urban conflict' (Correo, 2017). The long term impact of these programmes can be seen in the subsequent development of 'Social Urbanism' explained in later sections of this paper.

A slum-upgrading programme, the *Programa Integral de Mejoramiento de Barrios Subnormales* (PRIMED) was initiated shortly after President Cesar Gaviria (1990-1994) gained office pledging more attention to crime-ridden Medellín. This was considered a special presidential programme for Medellín and was not continued once Gaviria left office in 1994. Neighbourhood renewal strategies (known as *Mejoramiento Integral Barrial*, MIB in Spanish) was a national initiative promoted from the 1980s onwards with international support from the World Bank that financed at least 40 different national programmes of neighbourhood renewal (Torres-Tovar, Rincón García and Vargas Moreno 2006). The later model adopted by the Municipality of Medellín, PRIMED, had some distinctive characteristics that set it apart from other national programmes (Torres-Tovar, Rincón García and Vargas Moreno 2006). Its key components were: land tenure legalization; home improvement; removal and resettlement of families occupying areas of geological risk; settlement upgrading including infrastructure and services; and support for community development and participation (World Bank, 2003: 86). Between 1992 and 1996 PRIMED focused specifically on poor neighbourhoods and addressed the needs of 55,000 slum dwellers in the first phase. UN-Habitat (2013, p133) referred to it 'as exemplar participative slum upgrading'.

Four key principles underpinned the PRIMED: (1) area-based, integrated planning and execution; (2) stimulating community ownership of new infrastructure and services; (3) participatory planning of urban development; and (4) focus on governance and governability (World Bank 2003 p86). These four principles stress the importance of the delivery and impact of these interventions not being measured in terms of physical improvements only. Instead, interventions should be understood 'as a broader transformation that affects relationships within communities, between communities and government, and between the different branches of government, all of which have had to learn to work together in an integrated approach' (Imparto, 2003:87). **(Figure 5)**

The degree to which PRIMED underpinned the ideological and practical basis of Medellín's municipal policy changes throughout the 1990s is significant. Herein emerged ideas around social participation that later become consolidated as *Proyectos Urbanos Integrales* (Urban Integral projects- PUI). The PUI became a normative mechanism for urban intervention that emerged under the political approach of 'Social Urbanism' in parallel to the 1999 POT, and is thus discussed further in this paper. Its early ideological roots however are closely linked with the ideas emerging from the Presidential Council and the PRIMED programme.

PRIMED, it might be argued, has received little academic and professional coverage despite its substantial contribution towards integrating planning and communities through an innovative

process. The major institutional shift recorded (at least on an international level) is that this process provided a basis for what is now understood as 'Social Urbanism'. This concept, as discussed below, was introduced by Sergio Fajardo in 2004, when the new planning system was in place following the approval of the first POT for the Municipality of Medellín in 1999.

Figure 5 Juan Bobo neighbourhood (2004) Award-winning example of integral neighbourhood improvement approach in Medellín. **Source:** the authors

POT 1999 and its Development Tools

In addition to the POT, since 1995 all Mayoral candidates in Colombia have been required to propose a Municipal Development Plan (Plan de Desarrollo Municipal) during his/her political campaign. The Municipal Development Plan is a political programme that lasts the duration of the particular Mayorality. Whilst between 1991 and 1995 the Municipality of Medellín developed instruments for social participation, in 1999 the first Land Use Plan (POT) for the city was introduced, with an initial duration of three consecutive mayoral terms, (12 years)⁴. It remains, to this day, the primary local plan developed by the city municipality. The following section focuses on the most recent 2014 POT.

The first POT 1999 was designed to curtail the city's uncontrolled growth and to ensure a fairer distribution of benefits and responsibilities among developers related to their land development activities. Through POT policy the developer was expected to provide the necessary services and infrastructure when developing a site. In practice private interests have remained very significant throughout the process and control over housing speculation has been difficult to achieve. However, the POT offered a key message for urban planning that contributed to an increased level of consciousness among state institutions of the need for more structured planning approaches and the significance of scientific support in the development of these approaches. The POT in Medellín was also key in promoting a commitment to social participation, which was later promoted at a national level.

Between 1991 and 1997 a variety of instruments were introduced at a national level to implement the POTs (Ortiz 2014). The Partial Plans (*Planes Parciales – PP*), partly inspired by international precedents from Spain, Japan and Belgium, were understood as a 'land management tool that enables the assembly of parcels/lots, and requires coordinated urban design and self-funding mechanisms' (Ortiz 2012). Across Colombia, and in the case of Medellín, the PPs's aim was to unite isolated plots of land that were being developed without consideration of their wider context. The primary function of the PP was to achieve a more equitable distribution of charges, fees and responsibilities to land developers that could be more proportional to the needs of the whole plot and the surrounding city.

Ortiz (2014) provides insight into how Planes Parciales were used as a land use management tool to facilitate large-scale projects. Her key argument is that PP created a socially progressive framework for developing inner city land, but relied heavily on the political aspect of the project and in establishing betterment rates on land to control land speculation practices. However, a different land use management tool would be favoured by the city administrations that developed what

⁴ However, this only applies to its 'structural' content, whereas medium term content covers two administrations, and short term content (planes de actuación, etc) covers one administration.

would come to be known as ‘social urbanism’: the Integrated Urban Project (*Proyecto Integral Urbano* – PUI).

2004-2012 Social Urbanism

During 2001-2002, the Universidad Pontificia Bolivariana (UPB) led criticism of the 1990s urban strategies and programmes, such as PRIMED. A research agency based at the University, ran workshops on urban challenges and became known as the Atelier of the Northern Neighbourhoods (El Taller del Norte). The Atelier was led by young architects and city-planners and counted with international participation of Spanish academic and practitioner Joan Busquets from Barcelona. The research focused on the development of policies and programmes established in areas of the city experiencing social difficulties. It explored the concept of delivering projects in poorer neighbourhoods through an integrated approach to planning.

The position that emerged from the atelier resonated with Sergio Fajardo’s (Mayor of Medellin) overarching political objective, which was to achieve social integration through improving access to culture and education, particularly in the areas of the North of Medellin. In 2002-03 Fajardo invited this group of experts to participate in the development of his government plan. The aim was to expand on the idea of integration of urbanism and architecture in relation to public space, mobility, transport and belonging.

Using ‘Integrated Urban Projects’ (PUI), which were an administrative tool aimed at wider social participation and rooted in the improvement of conditions in areas of informal urban expansion that needed urgent attention, Fajardo’s administration addressed both physical interventions and social programmes. PUIs allowed for the integration of a number of projects facilitating the concentration of budget on the poorest districts of the city (McGuirk 2014:241). (**Figure 6**)

Figure 6 Integrated Urban Project North-East Area (PUI Zona Nororiental) 2003-2007 **Source:** the authors

Fajardo’s political agenda was to make Medellín ‘the most educated city’ (Devlin and Chaskel 2004:8). Driven by an awareness that belonging and pride were intangible assets of city-life and neighbourliness, he shifted the town hall’s planning methodology away from development plans into participative strategies. The Integrated Urban Projects (PUIs) put in practice between 2004-2012, became a characteristic of the ‘social urbanism’ approach developed during this period.

During Fajardo’s term an Urban Development Agency (*Empresa de Desarrollo Urbano* – EDU) was set up to deliver and manage the PUIs. Initially under the direction of Alejandro Echeverri, EDU became the city’s housing, land and regeneration agency. Operating to this day, EDU owns, manages and develops land for and on behalf of the city. The agency was not entirely new. It had begun operating in 1993 in order to deliver a city-wide project for the park of San Antonio. Its powers and assets were transferred upon completion of the park to become the city’s land development agency operating with administrative and financial autonomy. Since its inception EDU has taken on a wide remit of service provision, including land management and urban consultancy.

More recently, under Mayor Anibal Gaviria from 2013 to 2016, a further new urban strategy called Unidad de Vida Articulada (UVA) – a series of leisure and cultural centres – was set up and managed by EDU. The UVAs are abandoned water tanks dispersed throughout the periphery of Medellín which are being transformed into cultural and educational centres in the neighbourhoods and

districts of Medellín, in order to promote the collective leisure time and generate encounters between citizens, thus promoting sport, recreation, culture and communal participation (EDU: accessed online 2016).

POT formulation and revisions

Within the POTs there have been varying shifts with regards to how institutional resources and capacities should be focused. POTs are valid for 12 years since approved, however there has been a number of revisions through which we can trace the structural shifts in ideology and practicalities that Medellín has been through (1999, 2006, 2014). It can be said that in the 1999 POT, strategies without a regulatory base were given a normative definition that transformed a previously 'intuitive' development process into public policy.

Subsequent POTs revisions have had a strong element of promoting social participation. Interestingly, this rhetoric first surfaces in the 2006 revision whereby both *participation* and *innovation* become key words to justify the revision, which highlights the aim of increasing the city's productive and competitive capacity through capitalising on its physical and social assets. The 2006 POT promoted a democratic and inclusive territorial development placing citizens and their wellbeing at the centre of decision-making processes (Alcaldía de Medellín 2006: 13). To this aim the 2006 POT placed greater emphasis on public space and mobility.

By 2010, the idea of innovation was deeply embedded in the political rhetoric. Gilbert (2014:265) attributes the emergence of innovation to the national plan established by President Santos⁵ in 2010, who set five 'locomotives' to drive the national economy: housing, agriculture, infrastructure, mining and innovation. Resonating with the determination and rhetoric of Santos' national plan, Medellín was awarded the international prize for the most Innovative City in 2013 by the Urban Land Institute in partnership with the Wall Street Journal and Citi (CitiGroup bank). This decision was made on the basis that Medellín had achieved a significant urban transformation through its infrastructural projects that demonstrated both innovation and leadership. The award highlighted the public libraries, parks and schools that had been built in the poor hillside neighbourhoods, as well as the transportation links that were provided with these, including a metro cable car system and escalators. These strategies were seen as promoting social equity and sustainability.⁶

This award gave Medellín a welcome presence on the international arena and created impetus for further change at a local level. The revised POT sought of 2006 sought to make the urban city more compact inwards, with a clearer definition of the urban-rural edge. There was a further shift in 2014 towards the development of a new POT whereby the green belt was prioritised. Nevertheless, the 2014 POT still carried heavy emphasis on social equity and inclusion.

Key themes in the 2014 POT are centred around building a healthier city by prioritising the cyclist and pedestrian, building more public space of higher quality and increasing sustainable transport systems (Alcaldía de Medellín 2014). Creating a sustainable city is also a key message, particularly with regard to environmental improvements. An example of this approach is '*Parques del Río*' a

⁵ President Santos has been president of Colombia since 2010. He was recipient of the Nobel Peace Prize in 2016 due to his contributions to the peace process in the country and his role in the negotiation of a peace treaty with the FARC-guerrilla movement.

⁶ WSJ and ULI, accessed online: <http://online.wsj.com/ad/cityoftheyear>

linear park built as a result of tunnelling the motorway, giving access to the river bank (**Figure 7**). The key areas for addressing its themes would be on the rural area beyond the green belt, on urban renewal alongside the river that runs the length of the city as well as along side the two watersheds of Santa Elena and Iguana streams, on improving land conditions within the city and in renovating the town centre. Lastly, environmental risk was a major concern with regard to issues of housing and habitat and land use. This is evidenced by the identification of areas of high risk of flooding and landslide, which are clearly defined in the document, together with approaches for risk management and risk mitigation strategies (Alcaldía de Medellín 2014).

Figure 7 River Park (Parques del Rio) **Source:** by the authors

The POT 2014 has a validity of twelve years and introduced a new financial instrument to plan and develop projects called Macro-proyectos, which five large portions of the city have been defined as. Macro-proyectos include all planning and management tools, such as PUIs and Partial Plans-and therefore involve much higher levels of complexity due to their scale (**Figure 8**).

Figure 8 Macro-projects (*'Macroyectos'*) as diverse areas for intervention in the POT 2014. **Source:** Adapted from the municipality of Medellín (Alcaldía de Medellín 2015)

Procurement and Institutions

When the Urban Land Institute prize was awarded in 2013, it was on the basis of Medellín's innovation in procurement and institutions – such as the public-private partnerships with EDU and EPM – as much as its physical projects and participatory strategies. The award valued how business, community organisations and universities worked together to fight violence. In particular how private-public partnerships have helped financing projects and the emphasis given to implementing participatory budgeting.

This innovation in procurement can be traced back to the entrepreneurship, and industrial paternalism witnessed earlier as Medellín entered its period of industrialisation, as explained earlier. In addition, the close relationship between research agencies rooted in Universities and their contribution to city planning is significant, with individuals' career paths weaving between research institutions such as Escuela del Hábitat (CEHAP – at the Universidad Nacional de Colombia Sede Medellín) and URBAM (an urban consultancy based at EAFIT University), and urban planning and management organisations such as the Consejo Territorial de Planeación de Medellín and EDU. These contributions demonstrate a close working relationship between theoretical ideas and institutional delivery, a working symbiosis of debate, policy and practice. The second revision of Medellín's 2006 POT was, for example, developed closely with CEHAP. The official mayoral publication is co-written between the university and the Mayor's office, highlighting the community-based workshops that took place during the revision, which encouraged a participative consultation process.

Future development

Key areas the city is focusing on regarding future development include mobility, environmental issues and integrated approaches to addressing the needs of informal settlements (barrios

populares) as well as urban renewal. Underpinning this is an approach focused on increasing public participation, building on the experiences developed under 'social urbanism'.

Building on the perceived success of innovative urban transport systems introduced since the start of the 21st century, the city sought to create a more integrated system with the two lines of the already existing overground metro system providing the backbone to ancillary modes of transport feeding passengers onto it: cablecars, tram, BRT, etc. Two new *metrocable* lines are opening in 2017, linking poor neighbourhoods in the mid-eastern side of the city to a new tram line (the Ayacucho line, which opened in 2015) connecting to the city centre. A further tram line is planned on the western side of the city, along Carrera 80 road, which runs on a N-S axis. Coupé (2013) has highlighted the complex relationship between the metrocable infrastructure and its environmental and socio-economic impacts. The metrocable generally has had a 'notable effect on urban integration' (Dávila 2013: 50) as residents feel part of the larger city. It has increased tourism (Coupé 2013) as visitors travel to previously inaccessible areas of the city. It has also created a collective understanding of the 'historical debt' as the metrocable has made 'more visible those populations discriminated against due to their poverty and the violent environment in which they must live' (Coupé 2013: 74). The challenge now is to continue to reap positive benefits from the new and planned transport systems and routes, while minimising and avoiding negative impacts that have been observed including the creation of legal uncertainty over easements by placing metrocable lines over individual properties and potential gentrification along tram corridors. Larger scale developments include linking Medellín to the growing network of national motorways which will connect it to the Pacific, the Caribbean and the capital, Bogotá, thus addressing the relative difficulty of land access to the city.

Environmental issues have received much less attention to date. González Escobar (2010), suggests that the Colombian city has not yet prioritised ecology as a major urban concern, as has been preoccupied with dealing with the armed conflict and urban violence to such a degree that issues of sustainability have been secondary. Duque (2013) concurs that there is a chronic disregard for environmental awareness. Colombian cities have developed throughout the 20th century with little regard to the impact cities have on their ecosystems, with urban growth leading to having little access to clean natural habitats. Waterways, for example, have become rubbish dumps and areas associated with high levels of crime, as they are commonly used for tipping cadavers. In Medellín, the Santa Elena stream runs through the city centre but it has been 'turned into a canal system and covered by large avenues' (Duque, 2013:40). New neighbourhood-scale initiatives to reclaim the natural environment include the partial pedestrianisation of La Playa, with tree planting, though falling short of uncovering the Santa Elena stream that runs underneath it. At a larger scale, the city is increasingly struggling with high levels of air pollution, exacerbated by its location in a deep and narrow valley, to which the metropolitan government agency (Área Metropolitana del Valle de Aburrá) is responding by promoting further integrated public transport, as well as emergency measures including stopping private vehicle circulation at times of peak pollution.

Providing improved mobility infrastructure and tackling pollution is an ever growing challenge because of the city's continuing (and projected) expansion, particularly up the steeper parts of the surrounding mountains, as the canyon fills up with development, both formal and informal. The 2014 POT revision has made an attempt to mitigate this by promoting more development towards the city centre so it can grow as a compact city model, but this requires a concerted effort of changes in patterns for both formal and informal development, mainly in terms of housing provision. These are two very established processes whose paradigms are not easy to shift. Municipal efforts to contain urban expansion through building the initial phase of a green belt around the city with related walkways and cycle routes (Jardín Circunvalar) have been ineffectual and hold no prospect of success, because only a small section of the originally proposed length has been developed and its

continuation is not currently in the administration's agenda, and there is mounting evidence that instead of containing urban expansion it is providing easier access for further informal development. Continuing informal development on these steep slopes in particular, while providing shelter to their residents, will expose an increasing amount of poor households to the risk of landslides – a hazard which is becoming increasingly likely with climate change and its impact on changing rainfall regimes. Meanwhile, the 2014 POT focuses its attention mostly on the already existing urban fabric, by proposing 'macro-proyectos' as a tool to improve environmental problems in the city by addressing large scale territories instead of smaller, more concentrated urban areas (as in the 2005 POT). In this context, both the Municipality and community organisations are talking about 'integrated neighbourhood improvement' in the informal settlements – if implemented, it remains to be seen to what extent this will build on earlier successes such as PRIMED, and how much will this help address the high inequality in the city.

The city is also continuing to develop participatory democracy processes such as 'participatory budgeting' and community involvement in planning, the former having been brought in by Fajardo's administration in an attempt to develop new democratic behaviour, strengthen civic identity and 'disarm politically violent actors and clientelistic politicians' (Urán 2010: 127). Though this has become part of local governance practice in the city, it has not done so evenly, with specific socio-political conditions in the different 'comunas' determining various degrees of uptake and forms of engagement (Urán 2012). In addition, it has had side effects such as reducing other forms of direct civic engagement such as through community self-build, as evidenced in the authors' ongoing research on community-based landslide risk strategies (Smith et al., 2017). However, seeing itself as a major exponent of participatory budgeting in Colombia, the city's municipal government is now promoting itself as a pioneer in wider citizen participation, establishing in 2017 a new municipal award in participation with three categories: civil society organisations, individual citizens and school initiatives.

Conclusion

This paper has traced the historical context of Medellín's development up to the 1990s when a main ideological shift occurred. This is understood as a key moment, or an inflection point, in the history of the city. The 1990s have been examined in closer detail specifically in relation to two major changes: (1) the urban law and Constitutional changes of the 1990s which led to the emergence of the City Land Use Plan (POT 1999), and (2) changes in procurement where large-scale projects could be funded through private-public partnerships and private companies acting as quasi-public institutions.

The analysis of the development trends, and policy, institutional and socio-economic constraints and barriers which are impinging on Medellín's development today, allows some key conclusions to be drawn. Firstly, the city centre is not being developed along a compact city model, and new development – high and low-income – is spreading outwards without services and employment being provided. New formal low-income developments in particular are replicating high-rise models which have failed in the past in both the Global South and the Global North. There is limited intervention in the informal areas, many of which are in highly vulnerable locations where the level of risk is likely to increase due to the higher and more intense rainfall regimes that have been predicted for Medellín by the Colombian Government's assessment of vulnerability and risk caused by climate change (IDEAM 2017). Interventions are mostly limited to land titling, an approach also used elsewhere in Latin American cities (see Brakarz 2016, for an overview), with little in the way of services and public space upgrading except around the major transport infrastructure projects, or support for home improvement. Investment in accessible and good quality public space is mostly restricted to certain wealthier areas of the city as well as specific flagship projects in lower income

areas, particularly linked to the iconic cable car lines, which have become part of the image of the city of Medellín and have been copied in other cities in Latin America.

Development (formal and informal) is happening with little regard for topography, ecological considerations and green infrastructure, with ensuing environmental impacts affecting ecological integrity and ecosystem services, as well as increased risk for occupants such as through landslides. The quality of the public realm in the city in general is not conducive to access and enjoyment by all ages and social groups, with cars and other motorised transport being given priority (even though there is a drive towards more widespread public transport infrastructure), and safety being an issue. This is going to increasingly affect the health and wellbeing of the city's population as it ages.

Though the population below the poverty line has fallen slightly more sharply in Medellín than in Colombia's other 12 metropolitan areas (from 25% to 14.1% between 2008 and 2016 – Medellín Cómo Vamos 2016), citizen's perceptions do not exactly mirror this, with those considering themselves to be poor having decreased from 26% to 12% between 2008 and 2011, but having increased again to 19% by 2017 (Medellín Cómo Vamos 2017). In addition, while 88% of surveyed citizens thought that things were improving in the city, in 2017 only 63% felt this way (Medellín Cómo Vamos 2017). It is therefore clear that the issues highlighted in this paper require urgent attention, not only for Medellín to become a more equitable and sustainable city, but also because Medellín's current acclaimed status means it is seen as a model for other Colombian cities, and cities elsewhere in Latin America.

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