Water Distribution as an Indicator of Social Inequality. The Case of Medellín, Colombia

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Abstract

In Latin America, one of the countries most severely affected by uneven distribution of water resources is Colombia where almost 30 per cent of the population has no access to this vital source, despite of the country's water wealth. This research addresses the phenomenon of water distribution in Medellín, Colombia's second biggest city. Medellín is an ideal case to examine due to the fact that the appropriation of water resources in both urban and rural areas has become one of the greatest sources of social and environmental conflicts while international actors are becoming significant contributors to this new emerging situation. Since 2004, the city has reported a rapid growth of desconectados (people disconnected from water supply) in the poorest neighborhoods as a result of the exorbitant increase in the water tariffs. One of the main causes of this problem is the accelerated process of modernization and expansion carried out by Colombia's largest public utility company - Empresas Públicas de Medellín (EPM) in order to increase its competitiveness in the international market. Additionally, the recent involvement of the private sector in distribution of water in rural areas posses a threat to traditional forms of water supply managed by acueductos comunitarios (water-user associations). As response to the current situation, a broad coalition of social movements formed in 2006 the Comisión Nacional en Defensa del Aqua y de la Vida (National Committee for the Defense of Water and Life), to promote a national water referendum to defend water as a human right. The Committee mobilized more than 2 million citizens and incorporated around 1.500 organizations. This research, therefore, explores the existing power relations though which uneven distribution of water resources is produced and maintained and how different social groups manage, confront and adapt within the changing political and economic system. Furthermore, it analyses new emerging social movements against privatization of water resources in Colombia and the discursive character of their politics.

1. Introduction

Global environmental problems such as deforestation, climate change and pollution, along with the impact of extreme poverty that has been worsened by privatization and commodification, are contributing factors to the water crisis in many parts of the world. According to the UN Millennium Development Goals (MDGs), by 2015, the number of people without sustainable access to safe drinking water and basic sanitation in the world should be halved (UN 2000, 2002). This target becomes especially challenging in South America, where 100 million people live without access to safe water, even though the continent hosts to 30% of the world's available freshwater resources.

The World Bank and the International Monetary Found (IMF) argue that the only way to provide water to the most marginalize areas in the world requires private investment. Therefore, the private sector is legitimized as a crucial player to achieve this goal. The privatization of water has significantly altered the social actors involved in this sector and thus a new geometry of social power has emerged (Swyngedouw 2004). This new-formed power relations often lead to structural conditions of inequality and injustice in the access to water (Castro 2007) by deciding who (social actors) will have access to or control over and who will be excluded from access and control over water resources. In this regard, accessibility becomes attached to positions of social power, both economically and in terms of gender and culture (Swyngedouw 2006).

Thus this paper examines the multiple power relations prevailing in Medellín though which uneven distribution of water resources is produced and maintained in both urban and rural areas and how different social groups manage, confront and adapt within the changing political and economic system. Furthermore, it analyses new emerging social movements against privatization of water resources in Colombia by exploring the discursive character of their politics as well as mechanisms and communication tools used to involve local communities.

Desconectados (people disconnected from water services) and acueductos comunitarios (water-user associations) are chosen as the focus of analysis. By applying a multi-scale analysis, it will be possible to identify what is their position within a broader political economy of global capitalism in which water supply services are embedded. Therefore, this research will be done at many levels (moving "upward") from the very local (Desconectados and acueductos comunitarios) to the global level (multinational water companies and multi-lateral organizations) and vice-versa. Additionally, a historical analysis of water distribution in the urban and rural parts of the city (moving "backward") will be elaborated in order to understand the antecedents of the actual condition.

To guide this research the following questions have been formulated:

1. Which power geometries prevail that determinate who (social actors) will have access to or control over and who will be excluded from access and control over water resources?

This question will address:

- Who gains from the uneven distribution of water services and who pays for the negative impacts?
- Who are the actors that benefit of this situation and who are the ones that suffer and in which ways?

- 2. What is the capacity of different social actors to manage, adapt, confront and innovate within the changing political and economic system and how this system determinates new patters of behavior?
- What social movements emerge as consequence of uneven distribution of water resources in the urban and rural areas of the city? This guestion will address:
 - What is the discursive character of their politics?
 - How do they struggle to secure access to water resources?
 - Which mechanisms and communications tools are used?
 - How are they embedded in other networks?

2. Main global water players

The global water industry is dominated by a small number of companies that form an oligopolistic market organization. Companies such as Suez, Veolia and Saur from France and Thames Water part of the RWE from Germany, control more than 80 per cent of the world's private water market while Suez and Veolia have the highest participation with two thirds of the market. These top four companies are involved in almost every process of water privatization in the world and they form joint ventures as a strategy to erode any possible competition (Swyngedouw 2006). Their presence in Latin America has been notorious in the last couple of years compared to other geographical regions (Table 1) due to several reasons: there is a significant number of cities with a upper-and-middle class population that are attractive for private investment. The weak performance of the public sector and its debt crises justifies private intervention as the most viable solution. Furthermore, neo-liberal policies have been intensely applied in this region in the past two decades with the support of multi-lateral organization such as the World Bank and the IMF through structural adjustment programs and credits.

With the introduction of multinational companies in the cycle of water distribution, a new geometry of social power emerges as a new set of "governing bodies" is introduced (Swyngedouw 2004). Water multinationals have great influence in policy-making, limiting the involvement of national governments and minimizing the democratic power of citizens. The transformation of water from public good to private commodity can be described as a process in which the expropriation of local water resources is encourage by the states and multi-lateral organizations by changing laws and producing new legal and institutional frameworks to force privatization. Consequently, water resources are transferred to private companies, which ultimately insert it in global circulation of capital. In this way, prices are set on market principles, capital is accumulated elsewhere and this vital source can be sold in an international market like any other private good.

Proportion of Water and Sanitation Services Privatized 1997 and 2010 projected					
Region	% Privatized, 1997	% Privatized, 2010	Value of privatized market (US\$, Billions		
Western Europe	20	35	10		
Central and East Europe	4	20	4		
North America	5	15	9		
Latin America	4	60	9		
Africa	3	33	3		
Asia	1	20	10		
Total			45		

Table 1: Water and Sanitation Privatization

Source: Swyngedouw, E. (2006) Power, Water and Money: Exploring the Nexus

Covering a market valued at over 45 billion US\$ (Table 1), water multinationals work on principles of profitability and competitiveness. Efforts are concentrated on providing water services in urban areas, especially in sectors with medium to high economic income. Rural areas continued to be marginalized due to the high capital required in infrastructure and the inability of the population to cover such costs. Private institutions have showed little interest in providing water to the most marginalized sectors of the society while the world's increasing water scarcity is seen as a golden market opportunity.

2.1 Water multinationals in Colombia

Multinationals companies in Colombia started their operations in the water sector with the introduction of the constitutional reform in 1991 (article 365) and the *Ley de Servicios Públicos Domiciliarios* (Law 142 of 1994). Since then, the number of private companies operating in this sector has steadily increased, and transnational companies have become an active player in the management of water and sanitation services. By 2004, there were 125 private and 48 mixed public-private water companies in the country. Multinational companies with significant presence in Colombia include Aguas de Barcelona and Canal de Isabel II from Spain and Veolia from France (Table 2). These companies are strongly present in the Colombian Caribbean, being the cities of Barranquilla and Cartagena the pioneers in water privatization in the country (Urrea and Camacho 2007).

Multinational corporations have entered the Colombian market by controlling water and sanitation services in highly populated areas. They claim that privatization is the best way to improve water supply and to extend services to the poor. However, while extracting millions in profits, transnational companies are denying to millions of Colombians access to clean drinking water. Constant failures to achieve high coverage of water and sanitation services are reported at the time that prices are being raised without proper justification. Between 1998 and 2008 the poorest neighborhoods reported an increment in the water tariffs of 300 percent while high-income areas reported 132 percent (Suárez and Cardona 2009). Studies have documented that in Colombia, 20 percent of its poorest population utilizes 8 percent of their income to pay water bills.

Such amount surprises when it is compared with countries like Guatemala, Peru and Mexico where population expend 2.5 percent, 4 percent and 6 percent respectively (UNPD 2006). As a result, around 400 thousand users have been disconnected from water services, the equivalent of 1.6 million of people distributed mainly in the following cities: Bogotá (236 thousand), Medellín (43 thousand) and Cartagena (15 thousand) (SSPD 2008).

City/ Company	Join venture	Multinational/ Country of origin	Starting contract	Duration (Years)
Cartagena/ Aguas de Cartagena (Acuacar)		Aguas de Barcelona (Agbar) /Spain	1995	20
Bogotá / Concesionaria Tibitoc S.A.	Proactiva Medio Ambiente/Spain	Veolia Environment/ France and FCC Group / Spain	1998	20
Montería/ Proactiva Aguas de Monteria S.A. E.S.P.	Proactiva Medio Ambiente/Spain	Veolia Environment/ France and FCC Group / Spain	2000	20
Tunja/ Proactiva Aguas de Tunja S.A. E.S.P.	Proactiva Medio Ambiente/Spain	Veolia Environment/ France and FCC Group / Spain	1997	30
San Andrés Islands/ Proactiva Aguas del Archipielago S.A. E.S.P	Proactiva Medio Ambiente/Spain	Veolia Environment/ France and FCC Group / Spain	2005	No information
Tocancipá (Cundinamarca)	Proactiva Medio Ambiente/Spain	Veolia Environment/ France and FCC Group / Spain	No information	No information
Barranquilla/ Triple A Barranquilla	INASSA/Spain	Canal Isabel II / Spain	1991	No information
Santa Marta /Metroagua	INASSA/Spain	Canal Isabel II / Spain	2000	No information
Soledad	INASSA/Spain	Canal Isabel II / Spain	No Information	20

 Table 2. Multinationals with presence in Colombia

3. Medellín and its water utility company

Medellín is the second biggest city in Colombia with a population of 2.5 million inhabitants distributed in a territory with urban and rural characteristics. It has been recognized for its industrial performance in the textile sector as well as production of food, chemical products and pharmaceuticals. Between 1930 and 1970, a period of economic prosperity, the city experienced a rapid urban expansion. Its population grew from 138.266 to 1.151.762 inhabitants respectively (Betancur 2007). As any other industrial city in Latin America, Medellín was affected by the deterioration of the "Fordist" industry. Manufacturing activities were no longer an engine of economic growth. In order to be competitive in a globalize world, local industries cut their wages, reduced jobs and enrolled in a process of subcontracting, increasing economic crisis and poverty. The stagnation of industrialization has been without any doubt one the causes of growing poverty, social polarization and inequality. This process has been interconnected with

the rise of the armed conflict, which has generated 123.618 Internally Displaced People (IDPs) according to reports provided by the *Personería Municipal* in 2008¹.

Estimates are that by 2004 about 60 percent of the urban population lives under the poverty line, while 50 percent of all children are undernourished and does not attend the school, on a continuous basis (Kruijit et al 2004). The population working for less-thanminimum wage² represents 75 percent (ROC 2008). The informal sector has a significant contribution to the local economy of the city and nowadays it plays an important role as a generator of employment. In 2006, it provided an estimated of 63.9 percent of all jobs (Alcaldía de Medellín 2006).

The city hosts one of the most successful public utility companies in Latin America -*Empresas Públicas de Medellín* (EPM). Founded in 1955, the utility provides electricity, gas, water and telecommunications. EPM is included within the Top 10 list as one of the biggest companies in Colombia with profits estimated at around US\$40,1 millions in 2009 (27 percent more than 2008). Both the World Bank and the International Monetary Found (IMF) has acknowledged the company as a model of success. In the last couple of years, EPM has received grants from multi-lateral organizations for modernization and expansion of its services in other regions in Colombia and Latin America including Panamá and Ecuador. As a result, the company is forced to act as a private institution (operate in a profitability base) in order to be competitive in the global market. Thus its capital has become increasingly internationalized and its operations are embedded in a global competitive process.

EPM constitutes the only company in Medellin that provides water and sanitation services to the urban areas. However, with the recent introduction of the "*Planes Departamentales de Agua*", it is expected that the company take control over water supply systems in the rural areas that traditionally have been managed by *acueductos comunitarios* (Water-user associations). The (re)-organization of power structures in the water sector, therefore, enables EPM to prosper and consolidate his monopolistic control over the region while the participation of citizens is diminished.

3.1 Desconectados and acueductos comunitarios

3.1.1 Desconectados

The number of *desconectados* of water services before 2002 constituted merely a small number in the reports and statistics of *Empresas Públicas de Medellín*. Following reforms introduced between 1999-2002, hausehold connected to water supplies without any permission were obliged to be legalized. Many of these households were located in the peripheries and supplied the poorest and most vulnerable population of the city. As a result, water users or "clients" (as their are called by EPM) were incorporated in a formal system of paying montly their bills. Taking into account the precarious living conditions of these users, this reform brough devastating outcomes. By failing to pay the bills on the indicated time, the water company by law was autorized to disconnect a household from its water supply. As a result, the number of households disconnected from water services grew from 31.003 in 2006 to 43,049 in 2009 (Graphic 1).

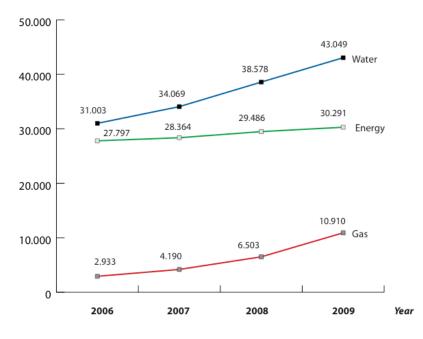
¹ According to a report published by Internal Displacement Monitoring Centre (IDMC) in 2008, Colombia hosts the world's second-largest displaced population after Sudan.

² The minimum wage in Colombia is estimated at 515.000 Colombian Pesos (US\$ 288.338)

According to the Law 142/1994, a household can be disconnected according to the following reasons:

- Water is supplied by an illegal connection or without any authorization.
- A water bill has not been paid on time. The user requires the accumulation of two bills to be disconnected from the service.
- Transference of the water service to another user or household for a temporal or permanent period.
- Do not provide information when a household changes its use (e.g. from residential to commercial, industrial, etc.).
- Damage, remove or change the equipment installed by the water company.
- Do not allow representatives of the water company to check the installed equipment.
- Make a (re)-connection without any authorization when the service has been suspended.

Nowadays, the problem of access to safe and affordable water services has turned into one of the highest contested terrains in the city. *Desconectados* together with the support of environmental and human right organizations are pressing EPM and the Municipality of Medellin to find solutions to this deplorable situation. In the meantime, some sectors of the population are obliged to obtain water by using illegal mechanisms (EPM reported 21.787 illegal re-connections in 2007) while others obtain the resource from the neighbours. By having 8.8 percent of the households without access to essential water services, the city is profoundly embedded in a situation of social emergency.



Graphic 1: Households disconnected from water services 2006-2009

Source: Empresas Públicas de Medellín (EPM), 2010

Empresas Públicas de Medellín recognizes that the phenomenon of disconnection is strongly linked to factors such as unemployment, social exclusion, levels of education, family size as well as the security factor in the *barrios*. However, the company proposes that the solution requires an integrated analysis and the involvement of different social actors. One of the strategies that EPM expects to implement to partially solve to problem is the introduction of a prepaid water program. However, its viability is still under consideration because it requires costly technologies.

From the Municipal side, the program "*Litros de Amor*" has been introduced in its Development Plan 2008-2011, as a response to the increasing pressure of civil society and environmental groups to find concrete solutions to water disconnection. The program benefits the poorest families of the city by delivering 25 liters per person per day without any cost. "*Litros de Amor*" operates since 2009 and 23.328 families have been included in the program. Thus, Medellín becomes the first city in Colombia that provides a minimum free quantity of water to the most marginalized sectors of the city. Although, an important effort has been made to improve the living conditions of *desconectados*, the situation would be set to worsen as the main causes of the problem remain to be solved.

3.1.2 Acueductos comunitarios (Water-user associations)

Acueductos comunitarios emerged as an alternative initiative to provide water in the rural and peri-urban areas as a response of the absence of governmental support. They function on a public and participatory basis and cover marginal areas in the peripheries of the cities in a successful manner. These acueductos have been operated for 20, 30 and 70 years and thus constitute a social and environmental heritage (Cadavid 2009). The Superintendencia de Servicios Públicos Domiciliarios (2006) estimates that around 12.0000 water-user associations operate in the whole country providing water to almost half of the Colombian rural population (approximately 4.5 million people) (Colmenares and Mira 2007).

A decree launched in 2008 (decree 3200 of 2008), creates the "*Planes Departamentales de Agua*", an initiative supported by the World Bank, to implement processes of centralization and modernization in water delivery services in the rural areas. The implementation of such plans questions the legitimacy of these local inniciatives, even though some of them emerged with governmental support. These community-based water management practices that go back centuries are in treat of being dismantled by private interests by justifying that water quality does not fulfill proper standards and better technological equipment is necessary to increase coverage. Nowadays, this centralized approach has become one of the main conflicts between water-user associations and the government (Quintana 2010).

These plans are introduced as an alternative to reorganize the actual system of water supply in rural areas, which is not taking fully advantage of the economies of scale. Water-user associations operating at the municipal level will be transferred at the departmental level. In this regard, the state and the private sector will have more autonomy and greater power to control water provision services in rural areas. In the department of Antioquia, where Medellín is the capital, these plans have been already enforced. At preset there are several *acueductos* operating on a regional level. This is the case of *Aguas de Oriente*, *Aguas de Occidente* and *Aguas de Uraba*. The participation of EPM in these associations corresponds to 56 percent while a 44 percent

is shared between the department and municipalities. This mode of organization becomes a pre-requisite to receive resources from the state and multi-lateral organizations.

4. Social movements in Latin America and their struggle for access to water

Popular mobilizations have been used in many regions in Latin America to halt the involvement of transnational corporations in the management of their water resources. These initiatives have emerged with great sympathy in the continent, as a result of the strong tradition of anti-imperialism and economic nationalism (Davidson-Harden 2009). This is the case of Bechtel Corporation in Cochabamba (Bolivia), Suez in Argentina as well as Suez and Aguas de Bilbao in Uruguay. Due to the strong opposition of the civil society to water privatization, the governments of these three countries were obliged to terminate contracts with these companies and return water services to the population. Furthermore, Uruguay, Ecuador and Bolivia have introduced in their national constitutions the access to water as a human right.

4.1 Comisión Nacional en Defensa del Agua y de la Vida (CNDAV)

Following similar reform efforts that succeeded in Uruguay in 2004, Ecuador in 2008 and Bolivia in 2009, a broad coalition of social movements in Colombia formed in 2006 the *Comisión Nacional en Defensa del Agua y de la Vida* (National Committee for the Defense of Water and Life). Its main purpose was to introduce a popular initiative to add explicit protection for the human right to water to the nation's constitution. It is important to point out that this initiative took place in a context of armed conflict, authoritarian government and scarce tradition of democratic participation. Under these conditions, however, the coalition received the support from 1.500 organizations from the entire country belonging to different sectors of society including environmental institutions, water-used associations, unions, women and youth groups, organizations of *campesinos*, the indigenous movement and the Afro- Colombian communities as well as international delegates from Uruguay, Argentina, Belgium, Canada, Italy and France.

In October 2008, the committee delivered more than two million signatures collected within a period of six months in order to call for a national water referendum to defend water as a human right. This referendum included a five-point proposal to reform the current water management model, which has historically favored transnational investment. The referendum went into debate by the First Commission of the House of Representatives of the Colombian Congress and significant modifications were made to the original text as an attempt to block the constitutional reform (Table 3). The committee rejected it by considering that the introduced changes reinforce privatization and deepen the uneven access to water services. Given such circumstances, the text was finally denied on May 18th 2010. Such a decision clearly illustrates the uneven power relations that shape the distribution of water resources in Colombias, the national government clearly shows its positions towards a development model that strongly supports private interests while ignoring the needs of its population.

Table 3. Five main	n points p	proposed in	the referendum
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Comisión Nacional en Defensa del Agua y de la Vida (CNDAV)		Modifications made by the National Congress	
1.	The state is obliged to guarantee the protection of water in all of its manifestations as essential for the life of all species and for present and future generations. Water is a common good and a public trust.	Water is a common good and a public trust. Eliminated	
2.	Access to drinking water is a fundamental right. The state has the obligation to supply sufficient potable water to everyone without discrimination and with gender equity. The state should guarantee a minimum free quantity of water basic to all (minimo vital gratuito)	The access to drinking water as a fundamental right Eliminated Minimum free quantity of water basic to all Eliminated	
3.	All waters, in all of their forms and states are national goods for public use. Waters that run off or are found in indigenous territories or in the collective territories of Afro-Colombian communities are to be considered part of those territories.	All waters, in all of their forms and states are national goods for public use Replaced by Waters that rise and fall in the same state are considered private	
4.	Ecosystems essential to the hydrological cycle should enjoy special state protection, guaranteeing the function of this cycle without threatening the rights of communities that traditionally inhabit these areas, and allowing access to abundant clean water by all living beings.	Ecosystems essential to the hydrological cycle should enjoy special state protection Eliminated	
5.	Water and sewage systems will be provided by the state or by organized communities. State or community entities established for this purpose will function on a not-for-profit basis.	Water and sewage systems will be provided by the state or by organized communities Eliminated	

The movement continues to defend its original text. It recognizes that a significant progress has been achieved not just in terms of the political capital being formed but also it has become a referent for other social movements in Colombian and other parts of the world. However, it requires additional strategies to continue with this mobilization and resistance. It proposes to consolidate alliances with other regional and national organizations, strength strategies of communication and research as well as establish a platform to integrate social groups affected by economic activities that make indiscriminate use of water resources such as mining, agribusiness and construction of dams.

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