

## **Inequality in new global governance arrangements: the North South Divide in city networks for global environmental governance**

*Bouteligier Sofie<sup>1</sup>*

### **Abstract**

Networks are often portrayed as more equal governance arrangements. Their horizontal character easily leads to the assumption that they go beyond traditional divides. Power relations within networks are neglected because the collaborative activities receive the bulk of attention. However, from a critical reading of the network and flows literature we know that networks are *not* free of power relations, and that they create new inequalities and sometimes even intensify existing ones.

Increasingly, city governments pursue innovative policies by exchanging knowledge and best practices in city networks. The revolution in communication technologies has facilitated the development and maintenance of such networks and some operate at a global scale, including cities from both the Global North and the Global South. It is believed that these governance arrangements empower cities because they (1) provide them with resources (access to information, financial and technical assistance etc.), (2) strengthen cities' capacities to deal with complex (environmental) problems, (3) make that cities establish relationships with actors that would otherwise be inaccessible and (4) voice cities' concerns at the international level. Despite the potential for empowerment, I argue that the inclusion of cities from the Global South in global city networks does not assure equal voices and positions for cities from the Global North and the Global South.

In response to the critique that literature on the network society has silenced power, Manuel Castells (2009) has distinguished four types of power in networks. Using Castells's conceptual framework, this paper addresses power relations in two city networks for global environmental governance: the World Association of the Major Metropolises and the C40 Climate Leadership Group. A large number of interviews and direct observations of network meetings have provided the author with significant empirical evidence on the day-to-day reality of network interactions. Power relations that result from informational, ideational and financial flows are at the core of attention. The paper reveals contributor/receiver linkages and their consequences for the networks' functioning. The conclusions are framed by theoretical considerations on the significance of cities from the Global South in processes of political globalization.

### **Introduction**

The global governance concept allows for creative thinking about the contributions of a variety of actors (state, market and civil society) and levels (from the local to the global) in the tackling of global problems. Governance refers to "a new process of governing" (Rhodes 1996, 652-653) and global governance includes "systems of rule at all levels of human activity – from the family to the international organization – in which the pursuit of goals through the exercise of control has transnational repercussions" (Rosenau 1995, 13). Such new processes and systems bring about power constellations that might be different from what we have known in the past (Mol 2008, 97) and therefore need to be studied.

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<sup>1</sup> Sofie Bouteligier was a doctoral research fellow at the Global Environmental Governance and Sustainable Development Research Group of K.U.Leuven, Belgium and a junior member of the Leuven Centre for Global Governance Studies. Since September 2011, she is working as a postdoctoral researcher at the Environmental Policy Group of Wageningen University, the Netherlands.

Networked forms of governance are now receiving increasing attention. Because of their horizontal character, it is often assumed that they generate more equal relations. However, a critical reading of network and flows literature and a thorough study of networks' functioning and management show<sup>2</sup> that reality is much more nuanced. Networks that bring together city governments in order to exchange information, knowledge, and best practices on common environmental problems are at the centre of attention in this paper. Such networked constellations allow for conceptualizing cities – traditionally linked to *local* problems and policies – as vital actors in *global* governance. Globalization processes have stimulated the development of city networks. Borja and Castells have shown how relations between urban centers have been established in order to enable broader spheres of action (Borja and Castells 1997, 203). City networks provide an opportunity for urban areas to play a role in global governance and develop effective urban policies, which explains why city networks have known an upsurge in the last decades (Borja and Castells 1997, 205; Keiner and Kim 2007, 1371). However, recent research also counterbalances this optimism by pointing out the difficulties of managing and maintaining these networks (Keiner and Kim 2007, 1372).

When *global* city networks – by which I understand city networks that link up cities from at least three continents, covering both the Global North and the Global South – are discussed, the hypothesis is formulated that these networked configurations go beyond the traditional North-South divide (Castells 2000b, 407-459; Sassen 2000, 151; Sassen 2007, 24-25). However, this has not been examined systematically and little empirical evidence that supports this claim has been brought together. Many networks reproduce unequal relations and develop own power hierarchies. This can occur because of differences in the capacity to influence network interactions or because of the division of tasks, resources, and burdens (Brenner 2009, 47). Castells (2009) has identified four types of power in networks that result from networks' internal organization and functioning.

This paper examines two city networks for global environmental governance: the World Association of Major Metropolises (Metropolis) and the C40 Cities Climate Leadership Group (C40). The analysis pays particular attention to internal power relations that are connected to the networks' interactions and exchanges. The aim is to reveal (1) the extent to which these networks have an inclusive approach, (2) whether there is unequal involvement of cities from the Global North and the Global South in global city networks, (3) the four types of power, (4) the inequalities resulting from differences in positions and power, and (5) the consequences of these inequalities. My findings are based on: direct observations of meetings of both city networks, including their world conferences that gather all the

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<sup>2</sup> This paper is based on the author's PhD research on city networks for global environmental governance. The dissertation addresses more cases and more aspects than there are discussed in this paper.

participating cities (see annex 1 for an overview); interviews with the staff of the networks' secretariats, and with city officials coming from both the Global North and the Global South (see annex 2 for an overview); official documents of the city networks; and secondary literature. The structure is as follows: first, the conceptual framework is illuminated. Then, the four types of power, the resulting inequalities, and their consequences in Metropolis and C40 are revealed. Finally, the implications of the findings with regard to the significance of cities from the Global South in processes of political globalization are formulated.

### **Conceptual framework**

#### *(City) networks, flows, nodes, and hubs*

In his trilogy, Castells (2000b; 2000c; 2004b) claims that our globalizing society is a network society, which differs fundamentally from the previous industrial society. For Castells, the information age – as he calls the current historical phase that started in the 1980s – and its network society are qualitatively unprecedented. Therefore, the analysis of this society should be based on new concepts like networks, flows, and nodes.

The main advantages of *networks* – in comparison to vertical hierarchies – are their flexibility, scalability and survivability. Flexibility refers to the ability of networks to “reconfigure according to changing environments, keeping their goals while changing their components” (Castells 2004a, 5-6). Scalability means that the networks “can expand or shrink in size with little disruption” (Castells 2004, 5-6). Lastly, networks are characterized by survivability, because “they have no center, and can operate in a wide range of configurations”, they “can resist attacks on their nodes and codes because the codes of the network are contained in multiple nodes that can reproduce the instructions and find new ways to perform” (Castells 2004a, 5-6).

*Flows* are “purposeful, repetitive, programmable sequences of exchange and interaction between physically disjointed positions held by social actors in the economic, political and symbolic structures of society” (Castells 2000b, 442). They circulate and interact within networks (Castells 2000b, 36) and can contain ideas, information, products, services, money, etc. In the domain of environmental governance, environmental flows have been understood to be (1) physical environmental flows, i.e. material and energy flows and flows of environmental services and products, and (2) non-material environmental flows or “social relations and networks that give rise to, or accompany, the environmental flows” (Mol and Spaargaren 2006, 74; Spaargaren et al. 2006b, 5-6). For Castells (2000a, 14), the *space of flows* embodies the possibility to have instantaneous exchanges that enable simultaneous social practices on a global scale without a need for geographical proximity. The space of flows is placeless in its structural logic (Castells 2000b, 442-443) and therefore distinguished from the *space of places*. By place, Castells means “a locale whose form, function, and

meaning are self-contained within the boundaries of physical contiguity” (Castells 2000b, 453).

In addition to the circuit of exchanges/flows, the space of flows also finds its materiality in the places that are linked up to the network (Castells 2000b, 443).<sup>3</sup> Networks’ aims and characteristics determine which places are connected (Castells 2000b, 445). In networks for global environmental governance, for example, places where environmental flows intersect and where there is a concentration of vital knowledge (e.g. environmental professionals) are important. Networks assign each locale with a role and a weight (Castells 2000b, 445). Castells’s initial main distinction was between nodes and hubs. A *node* is: “a point where the curve intersects itself” (Castells 2000a, 15). It is a place that is “connected by electronically powered communication networks through which circulate and interact flows of information that ensure the time sharing of practices processed in such a space” (Castells 2004a, 36). Further, it is a “location of strategically important functions that build on a series of locality-based activities and organizations around a key function in the network” (Castells 2000b, 443). *Hubs* are nodes that ensure communication, coordination, and smooth interactions between network components (Castells 2000b, 443). In later work, Castells (2009) further differentiates various *roles* network components can fulfill. He conceptualizes all network components as nodes of which the “function and meaning depend on the programs of the network and on its interaction with other nodes in the network” (Castells 2009, 19). Apart from hubs, he also identifies *programmers*, *switchers*, and *gatekeepers*. They, respectively, (re)program the network, connect and ensure cooperation of different networks, and allow or block access of nodes and messages (Castells 2009, 42-47). Nodes with the same role can also be assigned a distinct *weight* (Castells 2000b, 443). Coordinating hubs, for example, can have regional or global weight, depending on the scope of their activities.

The quest for policies that successfully deal with common urban concerns has stimulated city governments to set up networks in which they exchange information and knowledge<sup>4</sup> (Bontenbal and van Lindert 2009; Borja and Castells 1997, 203-232; Keiner and Kim 2007; Kresl and Fry 2005, 135-162; Tjandradewi and Marcotullio 2009; de Villiers

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<sup>3</sup> A third layer of material support is “the spatial organization of the dominant, managerial elites [...] that exercise the directional functions around which such space is articulated” (Castells 2000b, 445). This relates to the fact that these elites create their own secluded communities and distinct lifestyles and will not be discussed in detail in this paper.

<sup>4</sup> Castells distinguishes between knowledge and information using Daniel Bell’s and Marc Porat’s definitions respectively. Knowledge is “a set of organized statements of facts or ideas, presenting a reasoned judgment or an experimental result, which is transmitted to others through some communication medium in some systematic form”. “Information is data that have been organized and communicated” (Castells 2000b, 17). As will become clear, both knowledge and information are exchanged within city networks. Throughout the paper, the concepts knowledge and information are understood in line with the definitions just mentioned.

2009). Various *city networks* have been and are being initiated at all levels: subnationally (e.g. Municipal Association of Victoria, Australia), nationally (e.g. National League of Cities, United States of America), regionally (e.g. Asian Network of Major Cities 21), and globally (e.g. United Cities and Local Governments (UCLG)). They have a variety of objectives and goals: settling social issues (e.g. Cities Alliance-Cities without Slums), creating an information society free of digital divide (e.g. Global Cities Dialogue), promoting peace, mutual respect, and understanding (e.g. Sister Cities International-Global Citizen Diplomacy Network), and so on. The complexity of many urban problems requires governance arrangements that enhance learning, interaction, integration, and experimentation (Loorbach 2010, 164).

City networks are not a new phenomenon, but it was the 1990s that saw an explosion of such initiatives, especially in the environmental domain. This is mostly ascribed to (chapter 28 of) Agenda 21, which recognizes the role of local authorities in the promotion of sustainable development and stimulates exchange and cooperation between them. The information and communication revolution made this exchange and cooperation easier, cheaper, and quicker (Borja and Castells 1997, 1-15; Kresl and Fry 2005, 120). The diversity among these city networks is enormous: there are older (e.g. Citynet, founded in 1987) and newer ones (e.g. C40, created in 2005), they have a specific (e.g. Energie-Cités, focusing on energy) or a broader scope (e.g. Eurocities, dealing with the following themes: cooperation, culture, economy, environment, knowledge society, transport, and social issues), they include small (e.g. Sustainable Cities and Towns Campaign, which has around 2.600 European local authorities as participants) or large cities (e.g. Metropolis, whose members have at least one million habitants), and they have many (e.g. the International Council for Local Environmental Initiatives (ICLEI), which has over 1.200 members) or a limited number of members (e.g. the Mega-Cities Project, which has 22 participating cities)<sup>5</sup>.

Despite their diversity, most city networks share the following aspirations: (1) exchange information, knowledge, and best practices, (2) increase cities' capacity, and (3) voice cities' concerns in the international arena. They stage events (workshops, conferences, summits) where city officials and/or mayors meet to present successful policies, learn from each other, and build up personal relationships. Several also use information technology (IT) to develop tools that facilitate exchange and cooperation, such as online databases of successful policies, mailing lists, and intranet services. Often, city networks cooperate with

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<sup>5</sup> Given the proliferation of city networks, it is impossible to give an exhaustive and up-to-date list of the currently existing city networks. Two noteworthy efforts in this regard are the *UEMRI guide to city networks*, which has enlisted global (19), regional (17), and national (103) city networks. These city networks address diverse topics (<http://www.gdrc.org/uem/networks/networks.html>). The project "Networking Cities and Regions for Sustainability (NetCiRes)" of Schmid and colleagues lists and analyzes networks that aim at sustainable urban and regional development (<http://sustainablecities.ethz.ch/>).

international organizations (like UN-Habitat, the World Bank, the Food and Agriculture Organization (FAO)) (The World Bank 2009; UNDP 2000), private actors (environmental consultants, energy service companies, financial institutions), or non-governmental organizations (NGOs). These external actors help to implement concrete projects by providing knowledge, services, or financial support. As such, city networks empower cities as they give them resources, access to otherwise inaccessible actors, and enhanced capacity. Metropolis and C40 represent this type of city networks.

### *Global North and Global South*

The Global North/Global South dichotomy – and parallel ones like developed/developing countries – is often used, but creates the illusion that there exist two worlds that are separated by a clear-cut divide. Furthermore, it ignores variations within one world (Eckl and Weber 2007, 17), although numerous rankings show the heterogeneity (e.g. Prescott-Allen 2001). However, we cannot fully neglect this division when discussing global (environmental) governance, since literature and the practice of multilateral negotiations have shown that there are still common interests and norms that unite countries in the Global North and the same is true for countries in the Global South (Okereke 2008; Williams 2005, 66). Najam (2005, 305), for example, states that a shared perception of being “disempowered, marginalized and disenfranchised by the international system” connects Southern countries. The existence and activities of the G-77 – a group of now 131 countries – illustrates this. Thus, although it is a simplification of reality (Weiss 2009, 282), it still makes sense to think of a Global North and a Global South in global environmental governance.

Making explicit what these concepts actually encompass remains difficult, especially when we talk about cities. This is because the notion North-South divide mainly refers to nation-states and has little attention for intra-state variations (Eckl and Weber 2007, 8). Differences between rural and urban contexts within a country are thus neglected. Furthermore, classifications of countries do not always fit in a city network context. For example, the North is often equated with Organisation for Economic Co-operation and Development (OECD) members and the South with non-OECD members (Karlsson et al. 2007, 668). However, this means that, for example, Mexico City is a city of the Global North, although in global city networks it is not necessarily perceived that way, nor does it present itself as such. This definitional issue has consequences for reality: once a city has been categorized as a city of the Global North, it misses out special assistance (technical, financial) that is provided by the network to cities in the Global South. Moreover, the OECD/Non-OECD categorization is not always followed within global environmental governance. The Kyoto Protocol to the United Nations Framework Convention on Climate Change, for example, introduced the distinction between Annex I and non-Annex I countries. Some

countries are annex I countries, but are not part of the OECD and vice versa. The list of non-Annex I countries largely corresponds with the list of developing countries in the Montreal Protocol on Substances that Deplete the Ozone Layer. Discussions on the statute of some non-Annex I countries to the Kyoto Protocol (e.g. China) illustrate how difficult it is to develop accurate categories and also shows how economic and political developments trigger debates about these categories' legitimacy.

In this paper, I analyze two city networks, which find their origin in different world orders. Metropolis was established in 1984, when the "Brandt-Line"<sup>6</sup> was still valid. The C40 was initiated in 2005. Within those 20 years, much has changed. The Soviet Union collapsed, Asian Tigers emerged, the political system in many Latin American countries changed, and the importance of other levels than the nation-state increased. Only the richest and the poorest countries and their cities belong to a clear category – center and periphery, as world system theorists would classify them – leaving space for a large group of countries and cities, with shifting positions and identities. Therefore, it is needed to unravel this complexity and its consequences for inequality in global governance.

### *Power*

Inequality within international politics, partnerships, alliances, and networks is a highly debated issue (e.g. Abrahamsen 2004; Chasek and Rajamani 2003; Clark 2003; Fisher and Green 2004; Krishna Dutt 2003). Although strived for, often, equal relations are not a reality (Clark 2003, 120; Huber 2008, 366). The Global South is included, but at the same time also confronted with inequalities in capacity, influence, access to resources and information, etc. (Biermann 2006, 106; Clark 2003, 182). Power is a central concept in IR studies, however, in the governance literature it is often neglected or underspecified (Arts and Van Tatenhove 2004, 340). This is even truer when networks are the topic of debate. Although the horizontal character of city networks easily leads to the assumption that this form of governance guarantees more equal relations, a critical reading of the network and flows literature and a thorough study of some city networks' functioning and management show that networks are not free of power relations and that inclusion does not guarantee equal voices. To the contrary, networks can replicate traditional power relations (Dingwerth 2008, 55) and create new ones. Consequently, also within a network context the power concept needs to be defined and power relations need to be studied.

Castells has been criticized for not examining power in networks in an adequate way. In his trilogy (Castells 2000b; 2000c; 2004b), he addresses power solely in terms of coercion,

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<sup>6</sup> The Brandt-Line was formulated in the report "North-South: A Programme for Survival", written in 1980 by a Commission chaired by Willy Brandt (Williams et al. 2009, 2-5) and distinguished a rich North from a poor South.

which hinders him from dealing with new forms of power (Stalder 2006, 203). Scholars who have pondered power in the network society commonly state that power struggles mainly relate to exclusion and access (Stalder 2006, 203-205). New inequalities and power constellations emerge because of inclusion in networks and access to flows (Mol 2008b, 76; Mol and Spaargaren 2006, 69). Therefore, some state that it is not the superior efficiency of networks we should focus on, but the ways in which the network society includes and excludes actors and places (Cortvriendt 2007, 175). Power struggles also relate to the development of truth claims and reliability and validity of information (May 2010, 39; Mol 2008b, 97).

In more recent work, Castells (2009) extensively discusses power in networks. He understands it to be essentially relational and identifies two sources of power: (1) coercion and (2) the construction of meaning. The latter refers to Foucault's idea of disciplinary discourses: actors' actions are guided through discourses that construct meaning. According to Castells (2009, 50), these sources of power reflect continuity with the past, whereas the "terrain where power relationships operate" has changed. This terrain is "primarily constructed around the articulation between the global and the local and it is primarily organized around networks, not single units" (Castells 2009, 50). He then distinguishes four types of power in networks:

(1) *Networking power*: the exclusion and inclusion of actors, nodes, and ideas in the network. The gatekeepers – i.e. the nodes that decide on blocking or allowing access – have power.

(2) *Network power*: the power of the network's standards over its components. This suggests that the network itself has power. At the same time, it also refers to the power of the programmers, those who won the battle over constituting the network and defining the network's initial standards and protocols. These standards and protocols are reflected in the normative framework that binds the nodes in the network.

(3) *Networked power*: the power of certain nodes over other nodes in the network. It can be expected that programmers have such power. Yet, given that power relations within each network are different and depend on a network's aims, it is necessary to examine in detail which nodes have power over other nodes. The hubs are also expected to have power since they coordinate the flows within the network.

(4) *Network-making power*: the power of the programmers – i.e. the nodes that constitute and reprogram the network – and of the switchers – i.e. the nodes that connect networks and ensure cooperation between different networks.



In his writings on power in networks, Castells does not refer to traditional power concepts from international relations literature. However, links can be made. Lukes (2005)<sup>7</sup> distinguishes three power dimensions: (1) the power over resources (information, expertise, money, credibility, sanctions, etc.) – i.e. the ability to make someone do something and use resource interdependencies to influence decision outcomes, (2) the power over processes – i.e. the ability to exclude others from the process of decision-making and/or to limit the agenda to particular issues, and (3) the power over meaning – i.e. the ability to manage meaning, to shape perceptions and preference in order to create legitimacy. Hardy (1994, 230-232) adds a fourth dimension, referring to Foucault’s idea of system power. In this fourth dimension, power is something actors do not control and it is not necessarily linked to conflict, which contrasts with the first three. Power results from processes of knowledge gathering. Discursive practices construct reality and ideas about appropriate action. A disciplinary society is the result (Brand and Thomas 2005, 91-92). No actor can escape the power relations embedded in the system (Hardy and Leiba-O’Sullivan 1998, 454-460). The first dimension of these four correlates with Castells’s understanding of power as coercion. However, the previous discussion of Castells’s four types of power in networks suggests that power operates in a more diffuse way, shaping practices and behavior rather than directly forcing network components to act in a particular way. Thus, the power over processes, the power over meaning, and system power seem to be more important for the study of networks’ internal functioning. These three dimensions are present in Castells’s four types of power in networks. Networking power mainly relates to power over processes; network power to power over meaning and system power; networked power and network-making power to power over processes and power over meaning. Table 1 summarizes Castells’s four types of power in networks and Lukes’s and Hardy’s four power dimensions and how these different conceptualizations relate to each other.

TABLE 1. CASTELLS’S 4 TYPES OF POWER IN NETWORKS AND 4 POWER DIMENSIONS (LUKES, HARDY)

<b>4 types of power in networks (Castells)</b>	<b>What?</b>	<b>Location of power</b>	<b>4 power dimensions (Lukes, Hardy)</b>
Networking power	Exclusion/inclusion	Gatekeepers	Power over processes
Network power	Imposition of standards & rules of network over components	Network Programmers	Power over meaning System power
Networked power	Power of nodes over other nodes	Dependent on network aims Hubs (coordination of flows)	Power over meaning Power over processes
Network-making power	Constitute & reprogram Connect & ensure cooperation	Programmers Switchers	Power over processes Power over meaning

Castells calls the contemporary era the information age, because knowledge generation and information processing have become sources of productivity (Castells 2000b, 17). Of course, information and knowledge have been important throughout human history. However, its importance has transformed (Borja and Castells 1997, 204) since knowledge is now managed

<sup>7</sup> A first edition of this book was published in 1974. Because the 2005 edition was used for this paper, reference is made to this second edition only.

as a strategic resource (Ergazakis et al. 2006, 76). Mol (2008, 277) claims that for understanding the current innovations and changes in environmental governance we have to concentrate on the centripetal movement of informational processes, informational resources and informational politics. It is the production, the processing, the use and the flow of, as well as the access to and the control over, information that is increasingly becoming vital in environmental governance practices and institutions". Thus, arrangements that have the production and exchange of information and knowledge at their core need to be examined as they create new (power) relations. City networks for global environmental governance are such arrangements and the evaluation further below indeed reveals complex (power) relations resulting from informational flows.

### **Analysis: power in Metropolis and C40**

#### ***Metropolis***

##### *Organization of the network*

Metropolis was initiated in 1984 on the initiative of Michel Giraud, the then chairman of the Île-de-France<sup>8</sup> regional council. Increased urbanization and related challenges created the need to facilitate cooperation between large cities. Twelve other cities and regions<sup>9</sup> participated in the meeting and one year later the Metropolis Association was officially created. Fourteen cities and regions<sup>10</sup> are recognized as founding members (Metropolis 2010a).

Metropolis currently has 119 metropolitan governments as members (see Map 1). These are cities with a population of over one million or capital cities with more than 250.000 inhabitants. Asian cities outweigh the other members in terms of numbers. The geographical distribution on December 31, 2010<sup>11</sup> was as follows: Africa (26), Asia-Pacific (50), Europe (17), North America (= Canada, USA, and Mexico) (9), and South America (17). Metropolis has no US members except for Atlanta and cities in Eastern Europe and the former Soviet Union are largely absent.

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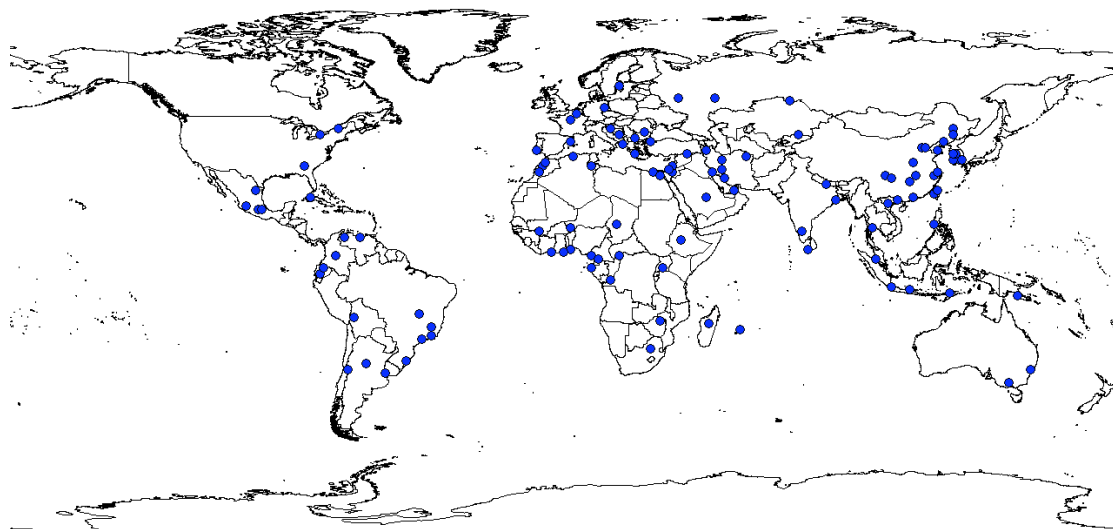
<sup>8</sup> Île-de-France is a region in France that encompasses the Paris metropolitan area and surroundings. Île-de-France has 11.8 million inhabitants. 80% of its territory (12.000 km<sup>2</sup>) exists of green open space and agricultural land.

<sup>9</sup> Abidjan, Addis Ababa, Barcelona, Buenos Aires, Cairo, Colombo, London, Los Angeles, Mexico City, New York City, Tokyo, and Turin.

<sup>10</sup> Abidjan, Addis Ababa, Barcelona, Buenos Aires, Cairo, Colombo, Île-de-France, London, Los Angeles, Mexico City, Montréal, New York City, Tokyo, and Turin.

<sup>11</sup> The map has not been updated yet, since possible changes in network membership are made official at the next Metropolis World Congress in Porto Alegre in November 2011.

MAP 1. METROPOLIS NETWORK



Metropolis has a broad scope, since it covers economic, social, cultural, and environmental issues. Over time, Metropolis also took up the task to voice large cities' concerns at the international level and point out cities' relevance for global governance (Metropolis 2005, 1).

In order to realize its goals, Metropolis organizes triennial World Congresses, where all members meet, the Board of Directors (see Table 2) is elected, and the agenda and goals for the coming three years are set. Since 1990, Standing Commissions that work on a particular theme are created at each World Congress. Every Standing Commission has a President and Vice-President. Cities who take up these roles (see Table 3) are responsible for organizing the Standing Commissions' meetings and guaranteeing progress. During the Standing Commissions' events, knowledge, and information on best practices and policies are exchanged. Two other major instruments were created throughout the years. First, the Technical Assistance Scheme (°1993) facilitates bilateral support relations between member cities. It enables cities to share their expertise with others who find difficulties to implement particular policies (see Table 4). Second, the International Institute for the Management of Major Metropolises<sup>12</sup> (°1997) offers applied management training in various urban sectors (Metropolis 2005, 7-8). The World Congresses, Standing Commissions' events, technical assistance visits, and training workshops indicate that, despite the increasing importance of virtual communication and exchanges, personal interactions are still seen to be valuable (Interviewees). At the 2005 Metropolis World Congress in Berlin, a working group was set up to investigate an initiative that could help cities strengthen their financial capability by

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<sup>12</sup> [www.iiggm.net](http://www.iiggm.net)

facilitating funding for investment projects. This has led to the launch of another instrument: the Global Fund for Cities Development (GFCD)<sup>13</sup> (°2010) that aims at assisting local authorities in the definition and implementation of urban development projects and the mobilization of the necessary funding (GFCD 2010).

In order to be able to represent metropolises at the international level, Metropolis has taken part in several international meetings (e.g. Rio Earth Summit in 1992, Johannesburg World Summit on Sustainable Development in 2002, and several editions of the World Urban Forum). Since 2004, this role has become increasingly institutionalized by being ascribed Economic and Social Council (ECOSOC) special consultative status<sup>14</sup> and by functioning as the metropolitan section of UCLG (Metropolis 2005, 7-8). Since 2000, Metropolis is also part of Cities Alliance’s Consultative Group, which gives Metropolis direct access to several multilateral institutions: United Nations Environment Programme (UNEP), UN-Habitat, the World Bank, the European Union, the Asian Development Bank, the International Labour Organization (ILO), and United Nations Development Programme (UNDP) (Cities Alliance 2010).

TABLE 2. METROPOLIS MANAGEMENT – BOARD OF DIRECTORS (Source: Metropolis 2008a, 7; 2008b)

Board of Directors	2006-2008	2009-2011
President	Barcelona	Île-de-France
First Executive Vice-President Europe	Île-de-France	Barcelona
Executive Vice-President Asia Pacific	Melbourne	Melbourne
Executive Vice-President and Treasurer North America	Montréal	Montréal
Executive Vice-President Africa	Abidjan	Abidjan
Executive Vice-President Latin America & Caribbean	Rio de Janeiro	São Paolo
Regional Vice-President Europe	Berlin	Berlin
Regional Vice-President Asia Pacific	Seoul	Seoul
Regional Vice-President North America	State of Mexico	State of Mexico
Regional Vice-President Africa	Antananarivo	Antananarivo
Regional Vice-President Latin America & Caribbean	Havana	Havana
Other members		
Europe	Istanbul, Moscow, and Brussels	Istanbul, Moscow, and Brussels, Stockholm
Asia Pacific	Guangzhou, Tianjin, and Dubai	Guangzhou and Cairo
North America	Toronto	Toronto
Africa	Bamako and Rabat	Bamako and Rabat
Latin America & Caribbean	São Paolo	-

<sup>13</sup> [www.fmdv.net](http://www.fmdv.net)

<sup>14</sup> In 2010, 3287 NGOs had ECOSOC consultative status. There are three categories of status. “General consultative status is reserved for large international NGOs whose area of work covers most of the issues on the agenda of ECOSOC and its subsidiary bodies [...] Special consultative status is granted to NGOs which have a special competence in, and are concerned specifically with, only a few of the fields of activity covered by the ECOSOC [...] Organizations that apply for consultative status but do not fit in any of the other categories are usually included in the Roster [...] Non-governmental organizations in general consultative status, special consultative status and on the Roster, that express their wish to attend the relevant international conferences convened by the United Nations and the meetings of the preparatory bodies of the said conferences shall as a rule be accredited for participation” (UNDESA 2010). Note that Metropolis had to define itself as an NGO to receive this status. Nevertheless, the description clarifies that it is an association of metropolises.

TABLE 3. METROPOLIS MANAGEMENT – STANDING COMMISSIONS (Source: Metropolis 2010b; 2010c)

Standing Commissions 2006-2008	President	Vice-President
<i>C1 Ecoregions</i>	Île-de-France	Toronto
<i>C2 Financing of Urban Services and Infrastructure</i>	Montréal	São Paulo
<i>C3 Comprehensive Neighbourhood Regeneration</i>	Barcelona	São Paulo
<i>C4 Urban Mobility Management</i>	Berlin	Seoul
<i>C5 Metropolitan Management</i>	Melbourne	State of Mexico
<i>(C6 Water Management)</i>	Melbourne	State of Mexico

Standing Commissions 2009-2011	President	Vice-President
<i>C1 Ecoregions/Food Safety</i>	Île-de-France	Brazzaville, Caracas, and Moscow
<i>C2 Managing Urban Growth</i>	Melbourne	Cairo
<i>C3 Integrated Urban Governance</i>	Berlin	Porto Alegre and State of Mexico
<i>C4 Megacities</i>	Mexico City	-
<i>C5 Partnership for Urban Innovation</i>	Barcelona	Karnataka Government (Bengaluru)
<i>(C6 Bank of Cities)</i>	-	-
<i>C7 Metropolis Women International Network</i>	Montréal	Regional sections: Abidjan, Amman, Athens, Bamako, Bangui, Barcelona, Brussels, Dakar, State of Mexico, Mashhad, Pune, and Seoul

TABLE 4. METROPOLIS TECHNICAL ASSISTANCE SCHEME

(Source: <http://www.metropolis.org/sites/default/files/pdf/technical-assistance.pdf>)

	Metropolises	Project
2006	Metropolis assisted Puebla	Assistance for the Development of a Municipal Solid Waste Program. There have been one mission in 2006.
2004	Metropolis assisted Brazzaville	Assistance for the Development of a Municipal Solid Waste Program. There have been two missions in 2004.
2004	Metropolis assisted La Paz	Assistance for the Development of a Municipal Solid Waste Program. There have been two missions in 2004.
2003	Metropolis assisted Quito	Assistance for the Development of a Municipal Solid Waste Program. There have been two missions in 2003.
2000/ 2001	Barcelona assisted Guadalajara	Assistance for the Development of a Municipal Solid Waste Program. There have been two missions in 2000/2001.
1998	Barcelona assisted Havana	Mission of Reconnaissance to Develop Havana's System of Land Information for the Planning and Urban Management of the City. This comprised one mission in 1998.
1997	Metropolis assisted Abidjan	Feasibility Study for the Rehabilitation of the Adjouffou Quarter of Port-Bouet. The study was carried out by an African external expert and was financed by Metropolis.
1997	IAURIF assisted Douala	Study of the Development of Infrastructure and Urban Management Techniques in Douala
1996/ 1997	Paris and Melbourne assisted Guangzhou	Improvement of the Transport System in Guangzhou. Four missions were carried out for this program in 1996/1997.
1996/ 1997	Barcelona assisted Cordoba	Strategic Planning for Tourism in the City of Cordoba. This comprised two missions in 1996/1997.
1996/ 1997	Toronto assisted Mexico	Exchanges on the Administrative and Technical Organisation of Planning. Three missions were carried out in 1996/1997.
1995/ 1997 & 1993/ 1994	Paris assisted Bucharest	Assistance for the Reorganisation and Planning of the Bucharest North Railway Station. There were two missions carried out over 1993/1994 and 1995/1997.
1995/ 1997	Barcelona, Lisbon and Paris assisted Havana	Study on Water Cycles, 1995-1997. The study enabled authorities in Havana to assess the current situation regarding the supply and purification of drinking water. The study established short, medium and long-term strategies for the reorganisation of services in charge of managing water cycles. This study was conducted in Havana by Cuban engineers from January 1995 to January 1997. The project was financed by a grant provided by the European Community. Furthermore, it estimated that an investment of US\$5mn was required to meet the city's needs and proposed a 10 year action plan.
1995/ 1996	Paris assisted Sarajevo	A Study on the Reconstruction and Rehabilitation of Several Districts in Sarajevo, 1995-1996. In 1995, Metropolis was given a grant from the European Union of 150,000 Ecus to implement a reconstruction program for various districts in Sarajevo with the technical, financial and material support of European partner cities. Metropolis directed a committee of Bosnian and European experts who defined and coordinated reconstruction measures.
1993/ 1994	Melbourne assisted Mexico	Town Planning Techniques for the Rapidly-growing Areas of Mexico City. Two missions were carried out in 1993/1994.

### *Network-making power*

The founding members can be conceptualized as Metropolis's initial *programmers*. Of the fourteen founding members eight were from the Global North and six from the Global South. They set the framework for Metropolis's creation. All the Southern founding members have continued membership until today. In the North, only three did. Yet, these three fulfill key tasks in the network (General Secretariat, Presidency, International Institute for the Management of Major Metropolises, as will be discussed further below) and therefore are able to reprogram the network and are the network's current imagineers. They are the driving force and therefore have a disproportionate share in shaping action (Routledge 2008, 213). Less obvious programmers are the cities that host the triennial World Congresses. Some of these host cities had almost unlimited freedom in setting the (normative) framework for the event, especially when they show enough capacity. Sydney, for example, thought it to be important to have the connecting cities theme as *leitmotiv* for the World Congress it hosted. And conversations with the organizing team of that World Congress showed that Sydney had significant autonomy to determine what the World Congress would look like in terms of content, invited speakers, program, and so on. (Interviewees). However, when the General Secretariat thinks a city faces capacity limits to host such an event, it will provide more support to that city (Interviewees), which also means that the city is restricted in its role as programmer. More cities from the Global North than cities from the Global South have had the opportunity to organize the World Congress. Of the ten summits between 1984 and 2010, only 2 have been hosted by cities in the Global South or emerging cities: Mexico City (1987), and Seoul (2002). Porto Alegre (Brazil) hosts the 2011 World Congress<sup>15</sup>.

The clearest *switcher* in Metropolis is the General Secretariat in Barcelona. It is the spokesperson for the existing partners and it establishes new partnerships. The General Secretary has already represented Metropolis several times at international events and therefore has become the contact for potential partners (Interviewees). The General Secretariat decides whether there is a match between Metropolis's normative framework and that of other networks and institutions it would like to work with. Decisions on cooperation are then discussed at the Board of Directors, which is followed by signing official Memorandums of Understanding (MoUs). The World Congress is a useful platform to attract new partners, since many networks and institutions (e.g. other city networks, UN organizations, private companies) send representatives to the World Congress to learn about the Standing Commissions' work and find out whether establishing a partnership with Metropolis would be interesting. At the Sydney World Congress, for example, Metropolis was approached by a representative of the FAO, which led to collaboration on the theme of

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<sup>15</sup> Due to the political circumstances, the World Congress that was planned to take place in Cairo in April 2011 has been postponed and will take place in Porto Alegre in November 2011.

food security between this organization and the 2009-2011 Standing Commission 1 (Interviewees). At the same event, other city networks had the opportunity to present their work. There was, for example, the UN Global Cities Programme & UGLG's Global Observatory on Local Democracy (UCLG Gold) Joint Forum where metropolitan governance systems were assessed. Such forums create the setting to establish partnerships since different actors with the same interests join in a discussion.

In sum, it can be said that a small group of cities exerts power when it comes to (re)formulating the normative framework. The key role of the General Secretariat indicates that the network is more centrally managed than is assumed theoretically.

#### *Network power*

Metropolis has a broad normative framework, which enables engaging many cities in the network, but makes it difficult to really influence members' behavior through particular network standards. What the member cities have in common is that they recognize the importance of striving for sustainable urban development. However, apart from pointing out the usefulness of working through partnerships, recognizing the cross-sectoral aspect of sustainability, and working through the given institutional set-up, there is little aspects in Metropolis's normative framework that direct the cities to act in a particular way. Furthermore, there are no enforcement mechanisms in place to redirect cities that do not perform well. This indicates that network power within Metropolis is rather weak.

#### *Networked power*

In Metropolis, there are three ways in which nodes have power over other nodes. First there are three cities that fulfill the role of *hub* – i.e. they coordinate and manage the global network and direct the most important informational flows – Barcelona, Île-de-France, and Montréal. They are the three Northern cities that were founding members and maintained their commitment to the network. Today, Barcelona hosts the General Secretariat, Île-de-France has the Presidency, and Montréal is home to the International Institute for the Management of Major Metropolises. As a consequence, they are the driving force behind the network and have relative power over other member cities.

Second, there is the Board of Directors. Metropolis's statutes guarantee balanced representation in the management structure. In the Board of Directors metropolises from all continents are represented (see Table 2). Still, cities from the Global North fulfill the highest functions – President, first Executive Vice-President, and Treasurer. This Board of Directors takes the major decisions concerning Metropolis's future, which are then communicated to the other members, either through the Web site or at the General Assembly of all members at the triennial World Congresses. The Board of Directors thus exerts power over the other

member cities, since it determines changes in management and sets the framework for future action.

Third, the Presidents of the Standing Commissions also have power. These Presidents decide on the Standing Commissions' topics and activities. Very often a city from the Global North holds the Presidency and a city from the Global South is the Vice-President (see Table 3). Southern cities are thus involved in organizing the Standing Commissions' work, albeit in a subordinated position.

In sum, although Metropolis tries to create a balance in its internal management, the most important functions reside in the Global North, which is a first indicator that the North-South divide is replicated in this global city network and that this finds its expression in clear sender-receiver relations. This can largely be explained by the heavy burden (human and financial resources) these tasks bring. Cities that take up such positions within the network have networked power, since they steer or direct and shape the space of action for others (Martinez-Diaz and Woods 2009, 11; Steyvers et al. 2008, 132).

#### *Networking power*

The most important *gatekeepers* in Metropolis are the General Secretariat and Presidency, and by extension the Board of Directors, since they decide over accession of members, composition of the Board of Directors, establishment of partnerships, and content of the future Standing Commissions. At the World Congresses, these decisions are submitted for approval, but observation of the General Assembly at the Sydney World Congress revealed that the General Assembly mainly asks clarifications and can demand further discussion of a particular decision, but does not really have the capacity to reject decisions. There were, for example, questions and disagreements over the GFCD, and therefore the issue was again discussed at the Board of Directors in Moscow, where an agreement was found. Divisive issues are thus transferred to a following Board of Directors in order to solve problematic aspects there.

Inclusion and exclusion of actors, nodes, and ideas occurs, however, in different settings and often informal processes are at play. Several interviewees mentioned, for example, how relations between cities outside Metropolis influence relations between cities within Metropolis. Although all member cities are equal, bilateral agreements between cities outside Metropolis make that these cities easily find each other within Metropolis. A concrete example that provides evidence for this is the first project of the GFCD. This project will be implemented in Antananarivo with the help of Île-de-France, which already developed a partnership in 1989 and has a representative to the mayor of Antananarivo since 2000. Within the framework of this *coopération décentralisée*, projects have been set up regarding good governance, transport, health, tourism, economic growth, environment, and education



(Conseil régional d'Île-de-France s.d.). The close relationship and good knowledge of the challenges in Antananarivo might have facilitated the choice to conduct the pilot project of the GFCD there. Furthermore, there is a special relationship between Île-de-France and other cities of the *francophonie* (Interviewees). This indicates that similarities and proximities between cities matter (Interviewees; Leitner et al. 2002, 292), which can lead to the emergence of informal subnetworks within the global city network.

In sum, networking power seems to reside with the same cities that also have networked power and network-making power. This confirms the idea that Metropolis has a core group of cities, are mainly based in the Global North, that drive the network and therefore have relative power over the other member cities (Schmid et al. 2007, 475).

## **C40**

### *Organization of the network*

In 2005, the then Mayor of London, Ken Livingstone, brought together a number of large cities and smaller exemplar cities<sup>16</sup> in the World Cities Leadership Climate Change Summit (Mayor of London 2005). The initiative grew out to be C40. The communiqué that was signed and released at the end of the London Summit urged cities to cooperate, commit to reducing greenhouse gas emissions, and adapt to climate change. Furthermore, it asked for the recognition of cities' actions at the international level and for the negotiation of a post-2012 climate agreement with massive global emission reductions. The 2007 New York City Summit communiqué and the 2009 Seoul Summit declaration reflected the same aims: be a catalyst for action, show that cities take up their responsibility in tackling climate change, and urge national governments to “engage, empower, and resource” cities (C40 2007; C40 2009; C40 2010b).

Today, C40 has 40 participating cities, which have committed themselves to action, and nineteen affiliated cities (see Map 2), of which some are exemplar cities, because of their past or current innovative policies<sup>17</sup>. The affiliated cities also include other types of cities, for example New Orleans, which was included in the network because it faces huge challenges with regard to extreme weather events and climate change (Interviewees). The current

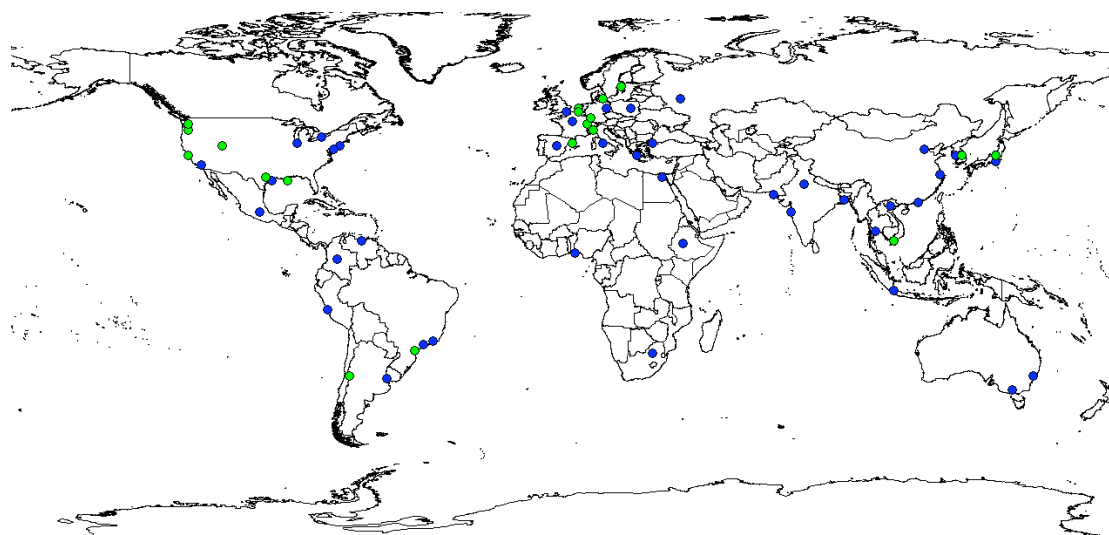
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<sup>16</sup> London, Barcelona, Beijing, Berlin, Brussels, Chicago, Curitiba, Delhi, Florida, Kingston (Jamaica), Madrid, Melbourne, Mexico City, New York City, Paris, Philadelphia, Rome, Saint Denis, San Francisco, São Paulo, Shanghai, Stockholm, Toronto, Victoria (Australia), and Zurich (Mayor of London 2005).

<sup>17</sup> Copenhagen, Stockholm, and Curitiba are such cities. Copenhagen and Stockholm have already presented various successful environmental policies at C40 events and are widely recognized as sustainable cities (Mega 2010). Further, Stockholm received the 2010 Green Capital of Europe Award. Under the leadership of Mayor Lerner (1971-1974, 1979-1983, and 1989-1993), Curitiba transformed in a sustainable city due to progressive planning and social policies. Despite more critical voices about Curitiba's success story (e.g. Moore 2007, 73-116), the city is still widely acknowledged as exemplar city by, for example, UNESCO, UNEP, UN-Habitat, Metropolis, and C40 (Sánchez and Moura 2005; UN-Habitat 2010, 157).

geographical distribution is as follows: participating cities: Africa (4), Asia-Pacific (14), Europe (9), North America (= Canada, USA, and Mexico) (7), and South America (6). Affiliate cities: Africa (0), Asia-Pacific (3), Europe (8), North America (6), and South America (2). Cities from all continents are members, but no cities from the Middle East participate and the involvement of African cities is limited (C40 2010a).

MAP 2. C40 NETWORK



LEGEND:

- participating (40)
- affiliate (19)

In order for the C40's goals to be reached, workshops, conferences, and summits are held on a regular basis.<sup>18</sup> These meetings facilitate the exchange of best practices, policies, and ideas. Since its inception, C40 has looked for partnerships with external actors in order to guarantee the implementation of projects and policies. In 2006, it signed an agreement with the Clinton Climate Initiative (CCI), which acts as its primary executive arm.<sup>19</sup> Since then, CCI has set up city programs to lower energy use and emissions in the area of building retrofits, outdoor lighting, waste management, and transportation. Several CCI city programs

<sup>18</sup> London Summit 2005 – New York Summit 2007 – Seoul Summit 2009.

Workshop on Transport and Congestion, London December 2007 – Workshop on Airports and Climate Protection, Los Angeles April 2008 – World Ports Conference, Rotterdam July 2008 – Conference on Climate Change, Adaptation and Mitigation, Tokyo October 2008 – Conference on the Launch of the Carbon Finance Capacity Building Programme in Emerging Mega Cities of the South, Basel February 2009 – Climate Summit for Mayors, Copenhagen December 2009 – Waste Workshop, London March 2010 – Workshop Strategies for Highly Efficient Cities, Berlin June 2010 – Deltas in Times of Climate Change Conference, Rotterdam September/October 2010 – Workshop Low Carbon Cities for High Quality Living, Hong Kong November 2010.

<sup>19</sup> In April 2011, Mayor Bloomberg and former President Bill Clinton announced that C40 and CCI will join in an expanded alliance. This should enable an increase in participating cities, a doubling of the budget, and a more efficient and effective way of working. Given that the concrete consequences of this decision were not yet clear in August 2011, they are not further discussed in this paper (C40 2011).

can be realized because of the close cooperation between private companies (who provide services and products), financial institutions (who provide the loans), and city governments. Furthermore, CCI created an emissions measurement toolset (Project 2°) in cooperation with Microsoft Corporation, Autodesk, and ICLEI (CCI 2010). In 2009, C40 together with Ecos, the World Bank, the Swiss Government (SECO), and the Canton of Basel City established the Carbon Finance Capacity Building Program (CFCB) that assists cities in the Global South to develop concrete projects, which reduce greenhouse gas emissions and generate carbon credits (CFCB 2010). Also in 2009, Arup, C40, and CCI launched a program of cooperation. In a first phase, Arup organizes UrbanLife workshops in six C40 cities (Toronto, Melbourne, São Paulo, Ho Chi Minh City, Addis Ababa, and one European city) in order to address particular challenges related to carbon reductions that the cities have chosen. These six cities can then function as leaders within C40 and other members can learn from the resulting projects and engage with Arup to develop and implement similar projects (C40 2010c; Interviewees). C40 activities are coordinated through the C40 Secretariat, based in London. Other managing bodies are the C40 Chair<sup>20</sup> and the Steering Committee<sup>21</sup> (since 2007), which sets the agenda and discusses membership.

Although it is not C40's major priority, the network has a political role as well. For this purpose, it presented communiqués at the CoP11 and Meeting of the Parties (MoP) 1 in Montréal (December 2005), the G8 Summit in Heiligendamm (June 2007)<sup>22</sup>, and the UN Climate Change Conference in Bali (December 2007) (Interviewees) and took part in the Climate Summit for Mayors – organized parallel to CoP-15 in Copenhagen – to urge national governments to take action, ask them to recognize the responsibility of cities, and announce actions major cities will undertake to tackle climate change (City of Copenhagen 2010).

### *Networking power*

The C40 Secretariat and CCI are the major *gatekeepers* in the C40 network. They decide on the inclusion and exclusion of partners. CCI has been criticized for favoring multinational companies (MNCs) based in the Global North and thus diminishing opportunities for smaller local players to be involved (Interviewees). By extension also the Steering Committee and the cities that host events can be conceptualized as gatekeepers. The former because it discusses

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<sup>20</sup> The following cities took up the role of Chair: London (2005-2008) and Toronto (2008-2010). The current Chair is New York City.

<sup>21</sup> The Steering Committee consists of: London, New York, Toronto, Los Angeles, São Paulo, Johannesburg, Berlin, Tokyo, and Seoul.

<sup>22</sup> The Group of Eight (G8) is an informal forum of heads of state and government, which initially discussed developments in the global economy, but now also covers other global issues. The G8 members are Germany, France, the UK, Italy, Japan, the USA, Canada (since 1976), and Russia (since 1998). The European Commission is also represented at all the meetings. Growth and responsibility were the guiding concepts under the German presidency of the G8. The Summit in Heiligendamm also discussed issues related to climate protection and the sustainable use of resources ([www.g-8.de](http://www.g-8.de)).

which cities can be participating and affiliate cities, the latter because it has a large share in choosing which cities and external actors are included as presenters and therefore also which ideas and practices are included as innovative and exemplar (Interviewees).

In order to establish the C40 (then C20), old linkages between some cities were highly relevant. The existing bond between the M4 – the mayors of London, Berlin, Paris, and Moscow<sup>23</sup> – was used to find support for establishing a new city network (Interviewees). This exemplifies how previous relations influence city network dynamics. However, other than in Metropolis, these relations did not determine the expansion of the C20 to the C40 or current positions within C40. Indeed, apart from personal contacts between former London Mayor Ken Livingstone and other mayors, the involvement of CCI helped to further expand the group of cities that wanted to be involved, thus assuring a global geography (Interviewees). Of the M4, only two are in the Steering Committee (London and Berlin). Similarities and proximities between cities matter in terms of which cities consult each other for advice and exchange (Interviewees; Leitner et al. 2002, 292). This could lead to the emergence of informal subnetworks within the global network.

#### *Network power*

C40's normative framework is narrower than that of Metropolis. Therefore, it is easier to see that the network components have to follow particular network standards. C40 acknowledges the IPCC findings and cities' share in global emissions levels. C40 has taken a clear stance in the climate change debate, stressing the urgency of immediate action. In its call for action by cities, it starts from the idea that cities have common but differentiated responsibilities and cities need to cooperate on a global scale. Furthermore, C40 stresses the need to form partnerships with private actors in order to advance progressive policies and projects, thus favoring a neoliberal environmentalist approach. Lastly, C40 wants national governments to recognize that cities are key to the tackling of climate change and move faster and be more ambitious (C20 2005; C40 2007; C40 2009; C40 2010b).

C40 cities' activities reflect this normative framework. The Climate Change Action Plans (CCAPs) stress the importance of the IPCC findings and the need for cities to take action and formulate ambitious targets. This means that some cities take a position that is different from their national governments. Leadership is expected from those cities that have enough capacity and it is hoped that cities in the Global South can leapfrog – i.e. “bypassing one or two generations of technology and directly skipping into the latest generation” (Huber 2008, 365) – or tunnel-through – i.e. “avoid climbing to old-industrial heights of resource

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<sup>23</sup> In 2004 regular meetings between the four mayors of Berlin, London, Moscow, and Paris were initiated. The first meeting was held in Moscow, the second meeting in Berlin (2006), and the third meeting in London (2007) (Greater London Authority 2007).

consumption and pollution” (Huber 2008, 365) while developing economically – because of the knowledge and assistance they receive from participating in the C40 network (Interviewees). The projects that have been initiated in partnership with CCI and Arup reflect the neoliberal environmentalist approach that favor market-based approaches towards environmental sustainability. In other words, the network’s standards determine the C40 cities’ way of working, even though there are no real enforcement mechanisms in place (yet).

#### *Networked power*

Within C40, it is less clear which nodes have power over other nodes, because the network is rather young and power relations between nodes are not yet as established as they are in Metropolis. Self-evidently, there is the C40 Secretariat that coordinates the network and thus exerts significant influence as a *hub*. The Steering Committee decides on the direction the C40 has to go (Interviewees) and therefore the cities that are part of it also have networked power, not the least because they have access to more information than other cities and can take management decisions. However, the most significant power relations within C40 seem to be linked to the normative framework.

#### *Network-making power*

Since it was the City of London that initiated C40, mayor Ken Livingstone and his advisers can be seen as the network’s imagineers and thus initial *programmers*. Since then, a C40 Secretariat, a Chair, and a Steering Committee have been established and CCI has been appointed as C40’s executive arm. Northern cities dominate this management structure, as the composition of the Steering Committee and the location of the C40 secretariat, the Chair, and the CCI headquarters<sup>24</sup> show. An explanation for assigning the most important functions to these cities is that a more extensive involvement is expected from this group, which requires the investment of time, money, and people (Interviewees). The same is true for hosting summits, conferences, and workshops.<sup>25</sup> The hosting cities determine the content and direction of the events to a great extent and therefore influence how problems and solutions are framed and which practices are seen as ‘best’. As Bulkeley (2006) has pointed out, these cities exert significant power, since “transfer of policy techniques and lessons is not a simple matter of exchange of knowledge or information but, rather, is deeply entangled with competing governmental rationalities about the nature of the policy problem and the legitimate means through which it should be addressed” (Bulkeley 2006, 1035). The majority

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<sup>24</sup> The CCI headquarters are located in New York City.

<sup>25</sup> New York, London, Los Angeles, Rotterdam, Tokyo, Seoul, Basel, Copenhagen, Berlin, and Hong Kong.

of best practices in the database on the C40 Web site<sup>26</sup> are coming from northern cities. And mainly northern affiliate cities are seen as exemplar cities and are invited as such to give presentations at C40 events (Interviewees). In other words, it is northern cities that have succeeded in the struggle over the construction of values and the acceptance of their definition of problems and solutions (Betsill and Bulkeley 2004, 475), which can be seen as an act of power (Barnett and Finnemore (1999, 710-713)). However, the future might bring change, since the 2011 Summit will take place in São Paulo and a rotation system for the Chair is in place (Interviewees).

The direct observation of the C40/Arup UrbanLife workshop in Melbourne provided insights in the reality of network-making power and how external partners can exert it. First, the City of Melbourne and Arup agreed on the topic of the workshop: addressing “the possibilities of a ‘smart city’<sup>27</sup> in terms of reduction of greenhouse gas emissions as part of a broad urban sustainability agenda” (Arup 2010c, 8). Prior to and at the beginning of the workshop Arup provided case studies (both real ones and simulations) that should indicate the potential of the smart city to “aid and inform the participants’ understanding of the area” (Arup 2010c, 26). From these examples the workshop participants then developed three concrete project ideas for the City of Melbourne. The framework set by Arup thus influenced the workshop outcome and the projects that will be implemented. Furthermore, it is hoped that the Melbourne projects will inform and inspire projects in other cities (Arup 2010c, 15). According to some scholars, companies like Arup have one main interest, which is developing “potentially replicable global financial products” (Hodson and Marvin 2010). Therefore, the services and products are “developed by a limited range of commercial interests” and are “strongly technocratic and productionist-oriented” (Hodson and Marvin 2010). During the workshop, this approach was accepted and the workshop participants did not question the relevance of particular solutions. In other words, Arup succeeded in shaping behavior by having a particular view and normative framework accepted.

The most obvious *switchers* in the C40 network are the C40 Secretariat and CCI. Since its inception, the C40 Secretariat does not only stimulate interaction between the C40 cities, but also explores potential partnerships with external actors (Interviewees). CCI established relations with global providers and funding institutions and therefore is key for the C40 cities for creating partnerships. CCI has city directors in almost all C40 cities and this staff is crucial for developing collaborative arrangements with local partners (Interviewees).

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<sup>26</sup> <http://www.c40cities.org/bestpractices/>.

<sup>27</sup> “A smart city is one in which the seams and structures of the various urban systems are made clear, simple, responsive and even malleable via contemporary technology and design. Citizens are not only engaged and informed in the relationship between their activities, their neighbourhoods, and the wider urban ecosystems, but are actively encouraged to see the city itself as something they can collectively *tune*, such that it is efficient, interactive, engaging, adaptive and flexible, as opposed to the inflexible, mono-functional and monolithic structures of many 20th century cities” (Arup 2010, 8)

CCI thus has a significant share in determining which external actors have the right vision and normative framework to contribute to a successful collaboration.

### **Implications of the findings**

The analysis of power in Metropolis and C40 reveals that cities from both the Global North and the Global South are included in global city networks, but that this inclusion has very diverse effects.

On the one hand, member cities are empowered because they get access to resources (informational, human, financial), increase their capacity to deal with complex problems, and establish relationships with actors that would otherwise be inaccessible. On the other hand, we witness unequal involvement of member cities, which results in power relations in city networks. Thus, although both Metropolis and C40 take measures to guarantee access and participation of cities from all continents, (structural) inequalities persist and often take subtle forms. These inequalities run along dividing lines we know from the past, which contradicts the hypothesis that networks go beyond the North-South divide.

Management and coordination functions in Metropolis and C40 mainly reside in the Global North and both networks have a few, very well connected nodes. A core group of, mostly northern, cities has *networked power*, *networking power*, and *network-making power* and therefore shapes the framework for action. Metropolis is characterized by clear sender-receiver relations, which are running from the Global North to the Global South. The sender-receiver relations in C40 are less clear and – so far – less fixed.

Apart from power that results from management and coordination functions and taking up leadership, power also resides in the normative framework that binds the nodes and can be witnessed most clearly in C40. Power generation has become more extensive and more abstractly constituted (James 2006, 176). This so-called *network power* gives power to the programmers and to the network itself and instigates (global) subjection (Bulkeley 2000; Bulkeley 2006; James 2006, 278). Network initiators have significant power since they have shaped the framework for action (Elzen et al. 2004, 185). Those that are involved in reprogramming the networks also have power. Power relates to both information (getting access to data) and knowledge (the struggle over determining the dominant discourse, best practices, etc.). The normative framework contains power since it frames the networks' actions and imposes behavior (Castells 2000b, 378-379). This type of power is also reflected in implicit hierarchies and stereotypes that are at work in networks. Most practices defined as 'best' are coming from Northern cities, which leaves out the possibility of South-North learning. This situation strengthens cities in the Global North and can cause unequal relations when knowledge is reproduced because it is perceived to be superior (Wilson and Johnson 2007, 256). So, there still exists a 'giving end' (forerunner cities) and a 'receiving end'

(Keiner and Kim 2007, 1393) in global city networks and this division largely coincides with the North-South divide. So, there is a “poverty of influence” (Najam 2005, 305) on the side of the Global South. In the case of C40, many projects that are initiated in cooperation with CCI are framed by a discourse of neoliberal environmentalism. The introduction and imposition of such discourse in the Global South has been criticized, especially when Southern actors feel the pressure to accept this discourse and way of working in order to receive resources and support, since this implies an (implicit) hierarchy of which types of activities is most valuable (Okereke 2008).

## **Conclusion**

The optimism about networks’ *potential* to go beyond old divisions could only be supported to the extent that Metropolis and C40 include cities from all continents and that they undertake efforts to erase inequalities. Yet, most important functions – and the resulting power – reside in the Global North.

Cooperative arrangements also face the challenge of interests and identities that are not to everyone’s benefit and result in inequalities. Some nodes (will) benefit more from the network than others. Every network has black holes – i.e. cities that are not part of the network because they have bad political or economic environments or resist to be subjected to dominant normative frameworks – and loose connections – i.e. cities that are part of the network, but are not well connected, thus missing opportunities to benefit from and contribute to the network.

Inclusion in the network does not necessarily coincide with empowerment. Even if network accessibility is given, certain skills required to fully exploit the opportunities and functionalities that networks offer. In the same sense, exclusion from a network does not automatically mean disempowerment. Those that are excluded are not subjected to the network’s normative framework and can distance themselves from a particular approach. This is an issue that needs to be studied more in the future.

In sum, globalization processes run along some traditional patterns of inequality and power. At the same time, they also create new divisions and these can change over and over again. The increasing significance of Asian cities, for example, might bring changes. These cities have distinct trajectories from European and North American cities and their empowerment and increased involvement in governance networks could stimulate a rethinking of networks’ functioning and normative framework.



## ANNEX 1 OVERVIEW INTERVIEWS

### C40 Cities Climate Leadership Group

Scott Bockskay

Country Director Australia Clinton Climate Initiative  
Interview Melbourne: March 18 2010

Stephen Crolius

Senior Director Purchasing Alliance Clinton Climate Initiative  
Interview Stamford: April 4 2008  
Interview New York City: February 19 2009

Beatriz del Valle

Líder Coordinador de Proyectos  
Dirección de Programa de Cambio Climático y Proyectos MDL  
La Secretaría del Medio Ambiente del Distrito Federal  
Questionnaire (e-mail): January 15 2008

Oliver Haugen

Manager C40 - Large Cities Climate Leadership Group  
Telephone interview: March 20 2007

Ken Livingstone

Former mayor of London – Founder of C40  
Interview London: September 3 2009

Cornelia Poczka

Leiterin der Bundes- und EU-Angelegenheiten  
Senatsverwaltung für Gesundheit, Umwelt und Verbraucherschutz, Berlin  
Interview Berlin: April 30 2008

Rafael Ramos

City Director Clinton Climate Initiative Mexico City (D.F.)  
Interview Mexico City: September 5 2007

Simon Reddy

Executive Director, C40  
Telephone interviews: January 8 2007  
January 9 2008  
April 25 2008  
January 13 2010  
January 19 2010  
March 29 2010  
April 12 2010  
Interview London: September 3 2009

Mark Watts

Former environmental/climate change advisor mayor Ken Livingstone  
Director ARUP  
Interview London: September 3 2009

### Metropolis

Manuel Beguier

Policy advisor  
Sustainable development. Innovative projects  
Conseil Régional Ile-de-France  
Interview Paris: November 27 2007

Barbara Berninger & Lutz Paproth

Senatsverwaltung für Stadtentwicklung, Berlin  
Interview Berlin: April 30 2008

Agnès Bickart  
 International Relations. General Secretariat Metropolis  
 Interview Barcelona: January 13 2009

Didier Jean  
 Secrétaire général. Chargé des réseaux internationaux et de la prospective unité des  
 affaires internationales et européennes  
 Conseil Régional Ile-de-France  
 Interview Paris: November 27 2007

Chris Johnson  
 Director Metropolis World Congress 2008  
 Series of interviews during Metropolis 9th World Congress. Connecting Cities  
 Sydney: October 22-25 2008

Mary Lewin  
 Manager International Affairs  
 Department of Planning and Community Development  
 State Government of Victoria  
 Interview Melbourne: April 18 2010

Caroline Mancel  
 Attaché  
 Directions des relations extérieures  
 Ministère de la région de Bruxelles-capital  
 Interview Brussels: December 19 2007  
 Telephone interview: February 12 2008

Georgina Pozo Riva  
 Advisor/Asesora  
 Secretaría de desarrollo urbano. Dirección general de planeación urbana  
 Interview State of Mexico: September 13 2007

Ariadna Pujol  
 Chief Operations Officer. General Secretariat Metropolis  
 Interview Barcelona: January 13 2009

Josep Roig and Christine Piquemal  
 General Secretary. General Secretariat Metropolis and  
 Deputy Secretary General. General Secretariat Metropolis  
 Interview Barcelona: January 12 2009

Daniya Scheulov  
 Executive Assistant  
 General Secretariat Metropolis  
 Interview Barcelona: January 13 2009

Olga Gonzalez  
 Project Officer  
 General Secretariat Metropolis  
 Interview Barcelona: January 13 2009

## ANNEX 2 OVERVIEW DIRECT OBSERVATIONS

### C40 Cities Climate Leadership Group

- London workshop on transport and congestion. December 3-5 2007
- C40 World Ports Climate Conference. Rotterdam. July 9-11 2008
- 3<sup>rd</sup> C40 Climate Summit. Seoul. May 18-21 2009
- C40/Arup UrbanLife Workshop. Melbourne. March 30-31 2010

### Metropolis

- Réunion de la commission 1: ecorégions. Paris. January 21-22 2008
- Metropolis 9th World Congress. Connecting Cities. Sydney. October 22-25 2008
- Metropolis C2 working group meeting. Melbourne. April 28 2010
- Metropolis Strategic Committee and Commission meetings. Barcelona. October 4-8 2010

## REFERENCES

- Abrahamsen, Rita. 2004. The power of partnerships in global governance. *Third World Quarterly*, 25 (8), 1453-1467.
- Arts, Bas, and Jan Van Tatenhove. 2004. Policy and power: a conceptual framework between the 'old' and 'new' policy idioms. *Policy Sciences*, 37, 339-356.
- Arup. 2010. *Melbourne smart city*. London, Melbourne: Arup.
- Barnett, Michael, and Martha Finnemore. 1999. The politics, power, and pathologies of international organizations. *International Organization*, 53 (4), 699-732.
- Betsill, Michele M., and Harriet Bulkeley. 2004. Transnational networks and global environmental governance: The Cities for Climate Protection Program. *International Studies Quarterly*, 48, 471-493.
- Biermann, Frank. 2006. Whose experts? The role of geographic representation in global environmental assessments, in *Global environmental assessments. Information and Influence*, edited by R.B. Mitchell, W.C. Clark, D.W. Cash and N.M. Dickson. Cambridge, London: MIT Press. 87-112.
- Bontenbal, Marike, and Paul van Lindert. 2009. Transnational city-to-city cooperation: issues arising from theory and practice. *Habitat International*, 33, 131-133.
- Brand, Peter, and Michael J. Thomas. 2005. *Urban environmentalism. Global change and the mediation of local conflict*. London, New York: Routledge.
- Borja, Jordi and Manuel Castells. 1997. *Local and global. The management of cities in the information age*. London: Earthscan.
- Brenner, Neil. 2009. A thousand leaves: notes on the geographies of uneven spatial development, in *The new political economy of scale*, edited by R. Keil and R. Mahon. Vancouver: University of British Columbia Press. 27-49.
- Bulkeley, Harriet. 2000. Discourse coalitions and the Australian climate change policy network. *Environment and Planning C: Government and Policy*, 18, 727-748.
- Bulkeley, Harriet. 2006. Urban sustainability: learning from best practice? *Environment and Planning A*, 38 (6), 1029-1044.
- C20. 2005. *Communiqué from large world cities (C20)*. Retrieved April 7, 2010, from C40 Web site: [www.c40cities.org/docs/summit2005/communique.pdf](http://www.c40cities.org/docs/summit2005/communique.pdf).
- C40. 2007. *C40 Summit communiqué*. Retrieved April 16, 2010, from C40 Web site: [www.c40cities.org/docs/communique\\_2007.pdf](http://www.c40cities.org/docs/communique_2007.pdf).
- C40. 2009. *C40 Large Cities Climate Summit Seoul. Seoul declaration*. Retrieved April 16, 2010, from C40 Web site: [www.c40cities.org/news/news-20090522.jsp](http://www.c40cities.org/news/news-20090522.jsp).
- C40. 2010a. *C40 goals for UNFCCC*. Retrieved April 9, 2010, from C40 Web site: [www.c40cities.org/about/goals.jsp](http://www.c40cities.org/about/goals.jsp).
- C40. 2010b. *C40 UrbanLife*. Retrieved April 21, 2010, from C40 Web site: [www.c40cities.org/initiatives/c40-urban-life.jsp](http://www.c40cities.org/initiatives/c40-urban-life.jsp).
- C40. 2011. *President Clinton and Mayor Bloomberg join forces to combat climate change*. Retrieved, June 7, 2011, from C40 Web site: [www.c40cities.org/news/news-20110413.jsp](http://www.c40cities.org/news/news-20110413.jsp).
- Castells, Manuel. 2000a. Materials for an exploratory theory of the network society. *British Journal of Sociology*, 51 (1), 5-24.
- Castells, Manuel. 2000b. *The information age: economy, society and culture. Volume I. The rise of the network society*. 2 ed. Malden, Oxford, Carlton: Blackwell Publishing.
- Castells, Manuel. 2000c. *The information age: economy, society and culture. Volume III. End of millennium*. 2 ed. Malden, Oxford, Victoria: Blackwell Publishing.
- Castells, Manuel. 2004a. Informationalism, networks, and the network society: a theoretical blueprint, in *The network society. A cross-cultural perspective*, edited by M. Castells. Cheltenham, Northampton: Edward Elgar Publishing. 3-45.
- Castells, Manuel. 2004b. *The information age: economy, society and culture. Volume II. The power of identity*. 2 ed. Malden, Oxford, Victoria: Blackwell Publishing.
- Castells, Manuel. 2009. *Communication power*. Oxford, New York: Oxford University Press.

- CCI. 2010. *Our approach. Cities*. Retrieved April 7, 2010, from CCI Web site: [www.clintonfoundation.org/what-we-do:clinton-climate-initiative/our-approach/cities](http://www.clintonfoundation.org/what-we-do:clinton-climate-initiative/our-approach/cities).
- CFCB. 2010. *CFCB programme. How Carbon Finance supports sustainable development in megacities in the South*. Retrieved April 7, 2010, from CFCB Web site: [www.lowcarboncities.info/home.html](http://www.lowcarboncities.info/home.html).
- Chasek, Pamela S., and Lavanya Rajamani. 2003. Steps toward enhanced parity: negotiating capacity and strategies of developing countries, in *Providing global public goods*, edited by I. Kaul, P. Conceicao, K. Le Gouben and R.U. Mendoza. Oxford, New York: Oxford University Press. 245-262.
- Cities Alliance. 2010. *About Cities Alliance. Organisation*. Retrieved April 16, 2010, from Cities Alliance Web site: [www.citiesalliance.org/ca/Organisation](http://www.citiesalliance.org/ca/Organisation).
- City of Copenhagen. 2010. *The Copenhagen Climate Summit for Mayors*. Retrieved April 22, 2010, from City of Copenhagen Web site: [www.climatesummitformayors.dk](http://www.climatesummitformayors.dk).
- Clark, John. 2003. *Worlds apart. Civil society and the battle for ethical globalization*. London: Earthscan.
- Conseil régional d'île-de-France. s.d. *Coopération décentralisée. Commune urbaine d'Antananarivo*. Paris: Conseil régional d'île-de-France.
- Cortvriendt, Dieter. 2007. *The becoming of a global world: technology / networks / power / life*. PhD Diss. Leuven: Faculty of Social Sciences, Katholieke Universiteit Leuven.
- Dingwerth, Klaus. 2008. North-South parity in global governance: the affirmative procedures of the Forest Stewardship Council. *Global Governance*, 14, 53-71.
- Eckl, Julian, and Ralph Weber. 2007. North-South? Pitfalls of dividing the world by words. *Third World Quarterly*, 28 (1), 3-23.
- Elzen, Boelie, Frank Geels, and Ken Green. 2004. Conclusion. Transitions to sustainability - lessons learned and remaining challenges, in *System innovation and the transition to sustainability. Theory, evidence and policy*, edited by B. Elzen, F.W. Geels and K. Green. Cheltenham, Northampton: Edward Elgar. 282-300.
- Ergazakis, Kostas, Kostas Metaxiotis, and John Psarras. 2006. Knowledge cities: the answer to the needs of knowledge-based development. *Vine: The Journal of Information and Knowledge Management Systems*, 36 (1), 67-84.
- Fisher, Dana R., and Jessica F. Green. 2004. Understanding disenfranchisement: civil society and developing countries' influence and participation in global governance for sustainable development. *Global Environmental Politics*, 4 (3), 65-84.
- G8 Summit in Heiligendamm Web site: [www.g-8.de](http://www.g-8.de).
- GFCD Web site: [www.fmdv.net](http://www.fmdv.net).
- GFCD. 2010. *Global Fund for Cities Development. Who we are*. Retrieved April 6, 2010, from GFCD Web site: [www.fmdv.net](http://www.fmdv.net).
- Greater London Authority. 2007. *Five mayors tackle the big challenges facing their cities*. Retrieved August 11, 2010, from Greater London Authority Web site: [www.london.gov.uk/media/press\\_releases\\_mayoral/five-mayors-tackle-big-challengesfacing-their-cities](http://www.london.gov.uk/media/press_releases_mayoral/five-mayors-tackle-big-challengesfacing-their-cities).
- Hardy, Cynthia. 1994. Power and politics in organizations, in *Managing strategic action. Mobilizing change, concepts, readings and cases*, edited by C. Hardy. London, Thousand Oaks, New Delhi: Sage.
- Hardy, Cynthia, and Sharon Leiba-O'Sullivan. 1998. The power behind empowerment: implications for research and practice. *Human Relations*, 51 (4), 451-483.
- Hodson, Mike, and Simon Marvin. 2010. Urbanism in the anthropocene: ecological urbanism or premium ecological enclaves? *City*, 14 (3), 298-313.
- Huber, Joseph. 2008. Pioneer countries and the global diffusion of environmental innovations: theses from the viewpoint of ecological modernisation theory. *Global Environmental Change*, 18, 360-367.
- International Institute for the Management of Major Metropolises Web site: [www.iiggm.net](http://www.iiggm.net).
- James, Paul. 2006. *Globalism, nationalism, tribalism: bringing theory back in*. London: Sage.
- Karlsson, Sylvia, Tanja Srebotnjak, and Patricia Gonzales. 2007. Understanding the North-South knowledge divide and its implications for policy: a quantitative analysis of the

- generation of scientific knowledge in the environmental sciences. *Environmental Science and Policy*, 10, 668-684.
- Keiner, Marco, and Arley Kim. 2007. Transnational city networks for sustainability. *European Planning Studies*, 15 (10), 1369-1395.
- Kresl, Peter Karl, and Earl H. Fry. 2005. *The urban response to internationalization*. Cheltenham, Northampton: Edward Elgar.
- Krishna Dutt, Amitava. 2003. Globalization, North-South uneven development and international institutions, in *The role of international institutions in globalization. The challenges of reform*, edited by J.-R. Chen. Cheltenham, Northampton: Edward Elgar. 101-133.
- Leitner, Helga, Claire Pavlik, and Eric Sheppard. 2002. Networks, governance and the politics of scale: inter-urban networks and the European Union, in *Geographies of power. Placing scale*, edited by A. Herod and M.W. Wright. Oxford, Melbourne, Berlin: Blackwell publishing. 274-303.
- Loorbach, Derk. 2010. Transition management for sustainable development: a prescriptive, complexity-based governance framework. *Governance: An International Journal of Policy, Administration, and Institutions*, 23 (1), 161-183.
- Martinez-Diaz, Leonardo, and Woods, Ngaire. 2009. Introduction: developing countries in a networked global order in *Networks of influence? Developing countries in a networked global order*, edited by L. Martinez-Diaz and N. Woods (Eds.). Oxford: Oxford University Press. 1-18.
- Mayor of London. 2005. *Mayor brings together major cities to take lead on climate change*. Retrieved 2007, from C40 Web site (no longer available): [www.c40cities.org/news/archive.jsp](http://www.c40cities.org/news/archive.jsp).
- Mega, Voula P. 2010. *Sustainable cities for the third millennium: the odyssey of urban excellence*. Brussels: Springer.
- Metropolis. 2005. *Asociación mundial de las grandes metrópolis 1985-2005*. Bruxelles, Paris: Les Cahiers de l'Europe/European Review.
- Metropolis. 2008a. *Assemblée générale. Sydney 2008*. Sydney.
- Metropolis. 2008b. *Candidature to the board of directors. General assembly. Sydney 2008*. Sydney.
- Metropolis. 2010a. *About Metropolis. Our history*. Retrieved April 6, 2010, from Metropolis Web site: [www.metropolis.org/metropolis/en/node/23](http://www.metropolis.org/metropolis/en/node/23).
- Metropolis. 2010b. *Previous commissions. Metropolis 2006-2008*. Retrieved April 21, 2010, from Metropolis Web site: [www.metropolis.org/metropolis/en/node/660](http://www.metropolis.org/metropolis/en/node/660).
- Metropolis. 2010c. *Standing commissions*. Retrieved April 21, 2010, from Metropolis Web site: [www.metropolis.org/metropolis/en/node/1261](http://www.metropolis.org/metropolis/en/node/1261).
- Metropolis. 2011. *Technical assistance scheme*. Retrieved, August 12, 2011, from Metropolis Web site: [www.metropolis.org/sites/default/files/pdf/technical-assistance.pdf](http://www.metropolis.org/sites/default/files/pdf/technical-assistance.pdf).
- Mol, Arthur P.J. 2008. *Environmental reform in the Information Age. The contours of informational governance*. New York: Cambridge University Press.
- Mol, Arthur P.J., and Gert Spaargaren. 2006. Toward a sociology of environmental flows: A new agenda for twenty-first-century environmental sociology, in *Governing environmental flows. Global challenges to social theory*, edited by G. Spaargaren, A.P.J. Mol and F.H. Buttel. Cambridge: MIT Press. 39-82.
- Moore, Steven A. 2007. *Alternative routes to the sustainable city. Austin, Curitiba, and Frankfurt*. Plymouth: Lexington Books.
- Najam, Adil. 2005. Developing countries and global environmental governance: from contestation to participation to engagement. *International Environmental Agreements*, 5, 303-321.
- NetCiRes. 2011. *Evolution of sustainability city networks*. Retrieved, June 7, 2011, from NetCiRes Web site: [sustainablecities.ethz.ch/PDF/figure1.pdf](http://sustainablecities.ethz.ch/PDF/figure1.pdf).
- Okereke, Chukwumerije. 2008. Equity norms in global environmental governance. *Global Environmental Politics*, 8 (3), 25-50.
- Prescott-Allen, Robert. 2001. *The wellbeing of nations. A country-by-country index of quality*

- of life and the environment*. Washington, Covelo, London: Island Press.
- Rhodes, R.A.W. 1996. The new governance: governing without government. *Political Studies*, 44, 652-667.
- Rosenau, James N. 1995. Governance in the twentyfirst century. *Global Governance*, 1, 13-43.
- Routledge, Paul. 2008. Acting in the network: ANT and the politics of generating associations. *Environment and Planning D: Society and Space*, 26, 199-217.
- Sánchez, Fernanda, and Rosa Moura. 2005. Ciudades-modelo: estrategias convergentes para su difusión internacional. *Revista eure*, 31 (93), 21-34.
- Sassen, Saskia. 2000. New frontiers facing urban sociology at the Millenium. *British Journal of Sociology* 51 (1), 143-159.
- Sassen, Saskia. 2007. *A sociology of globalization*. New York, London: W.W. Norton & Company.
- Schmid, Willy A., Keiner, Marco, and Kim, Arley. 2007. *Networking cities and regions for sustainability*. Zürich: Institut für Raum-und Landschaftsentwicklung.
- Spaargaren, Gert, Arthur P.J Mol, and Hans Bruyninckx. 2006. Introduction: governing environmental flows in global modernity in *Governing environmental flows. Global challenges to social theory*, edited by G. Spaargaren, A.P.J. Mol and F.H. Buttel. Cambridge: MIT Press. 1-36.
- Stalder, Felix. 2006. *Manuel Castells. The theory of the network society*. Cambridge, Malden: Polity Press.
- Steyvers, Kristof, Tomas Bergström, Henry Bäck, Marcel Boogers, José Manuel Ruano de la Fuente, and Linze Schaap. 2008. From princeps to president? Comparing local political leadership transformation. *Local Government Studies*, 34 (2), 131-146.
- The World Bank 2009. *Systems of cities. Harnessing urbanization for growth and poverty alleviation. The World Bank urban and local government strategy*. Washington D.C.: The World Bank.
- Tjandradewi, Bernadia Irawati, and Peter J. Marcotullio. 2009. City-to-city networks: Asian perspectives on key elements and areas for success. *Habitat International*, 33, 165-172.
- UEMRI Web site: [www.gdrc.org/uem/networks/networks.html](http://www.gdrc.org/uem/networks/networks.html).
- UNDESA. 2010. *Introduction to ECOSOC consultative status*. Retrieved April 15, 2010, from UN Web site: [esango.un.org/paperless/Web?page=static&content=intro](http://esango.un.org/paperless/Web?page=static&content=intro).
- UNDP. 2000. *The challenges of linking: UNDP. Management Development and Governance Division. Bureau for Development Policy*.
- UN-Habitat. 2010. *State of the world's cities 2010/2011. Bridging the urban divide*. London, Washington DC: Earthscan.
- Weiss, Thomas G. 2009. Moving beyond North-South theatre. *Third World Quarterly*, 30 (2), 271-284.
- Williams, Marc. 2005. The Third World and global environmental negotiations: interests, institutions and ideas. *Global Environmental Politics*, 5 (3), 48-69.
- Wilson, Gordon, and Hazel Johnson. 2007. Knowledge, learning and practice in North-South practitioner-to-practitioner municipal partnerships. *Local Government Studies*, 33 (2), 253-269.