Conceptualizing global environmental consultancy firms as actors in global environmental governance

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Paper presented at the 2009 Amsterdam Conference on the Human Dimensions of Global Environmental Change. December 2-4.

Architecture, Panel 1: Architecture and Agency beyond the State

Abstract

Today, private companies are conceptualized as political actors in global environmental governance (Clapp, Levy and Newell, Pattberg). They are both recipients of, as well as contributors to the development of environmental norms, standards and legislation. Furthermore, they can influence environmental policymaking through lobbying and private environmental governance. However, not much research has been conducted on a (sub-)sector that seems to have a significant impact on environmental governance: the environmental services industry (e.g. Miles, Schulz). This sector enables public and private actors to deliver environmental solutions by providing the necessary technology and expertise. One branch within the sector is of particular relevance when it comes to the transfer of environmental information and knowledge: environmental consulting.

This paper is an onset to investigate the role of environmental consultancy firms (ECFs) in global environmental governance. It argues that in the Information Age, a knowledge-intensive branch like environmental consultancy gains in strategic importance. Particular attention is paid to those ECFs that are active worldwide, as their transnational activities enable them to have an impact that is broad in geographic scope and affects various actors. Globalization theory and literature on networks, flows and global cities (Castells, Mol, Sassen) frame the topic theoretically. Point of departure is the idea that globalization processes enable other actors than the nation-state to take up a role in global environmental governance and in the provision of environmental information and knowledge. Furthermore, actors increasingly organize their global activities from metropolitan areas, which makes these places sites that concentrate vital knowledge, infrastructure and services.

The paper shows how global environmental consultancy firms can be conceptualized as actors in global environmental governance. It sketches the industry, discusses to what

extent global ECFs really are 'global' and focuses on the information and knowledge transfer (flows) that they generate.

Introduction

Throughout the past decades, the key international summits on the environment (Stockholm, Rio and Johannesburg) incrementally put greater emphasis on the role and responsibilities of business in environmental governance (Morgera 2004). Private actors needed to rethink their contribution to environmental protection and they adapted their attitudes from a reactive approach in the 1960s and 1970s (e.g. cleaning up pollution and environmental damage they had caused) to a more proactive strategy today that incorporates environmental values into all activities pursued (Berry and Rondinelli 1998: 38-39). This development has encouraged scholars to no longer approach business solely as the cause of environmental degradation and pollution, but to conceptualize private companies as potential sources of innovation and as "key political players" (Newell 2005; Levy and Newell 2005: 1-3). Indeed, the private sector influences environmental policymaking through lobbying (Clapp 2005; Coen 2004), but also via day-to-day implementation of environmental requirements, norms, standards and legislation and through private environmental governance (Pattberg 2007). Especially corporations that "strive to provide a 'seamless' service for their global clients" (Taylor et al. 2002: 233) and therefore organize their activities from a network of offices across the world have the potential to be true actors in global environmental governance. However, "we continue to lack both an understanding of the diverse ways in which firms contribute to the overall architecture of global environmental governance and a sophisticated comprehension of the reciprocal relationship between corporate strategy and international environmental regulation" (Levy and Newell 2005: 2). Newell and Levy stress that a "broader understanding of power and the multitude of ways in which it is exercised by business actors" (Newell and Levy 2005: 331) is needed, as well as it is necessary to "take serious the role of the firm as a political actor" (Levy and Newell 2005: 3).

A particular segment that seems to have a very significant impact on environmental governance, but has been understudied up to now, is the environmental services industry. This sector enables public and private actors to attain environmental solutions by providing the necessary technology and expertise. One branch within the sector is of particular relevance when it comes to the transfer of environmental information and knowledge: environmental consulting.

This paper wants to be a first onset to investigate the role of environmental consultancy firms (ECFs) in global environmental governance. It argues that in the Information Age, a knowledge-intensive branch like environmental consultancy gains in strategic importance. Although I agree with Morgan et al. that the consultancy industry cannot only be studied "from the point of view of the large global firms" (Morgan, Sturdy, and Quack 2006: 6), it is exactly this type of companies that is able to affect other global actors (MNCs, international financial institutions, regional organizations etc.) and thus have a global impact. An examination of how they are organized should allow for developing insights into the branch's geography and channels of influence and the sector's role in global environmental governance.

The following issues deserve attention before developing arguments further. First, 'global' companies are "social constructions" (Morgan 2003: 1-2). By this, I mean that these firms are perceived as being 'global' because they present themselves to be so (Bäcklund and Werr 2001) and/or because we conceptualize them as such. However, as will become clear further below, this 'global' character should not be taken for granted. Second, the sector does not exist of a homogenous group of companies, but is inherently diverse (in terms of activities, clients, geographical spreading, …) (Morgan 2003: 1-2). As a consequence, they should be analyzed both in relationship to their national contexts and as "an integral part of the creation of an emerging web of international institutional contexts" (Morgan 2003: 3). Finally, little research has been done on the environmental consultancy sector and its role in global environmental governance. Those publications that do exist are mostly country-specific (e.g. Caldwell and Smallman 1996; Schimming, Schulz, and Maier 2007) or focus on a particular service (e.g. environmental auditing: Maltby 1995). An evaluation of these companies' activities on a global scale is still missing. Therefore, the findings in this paper are based on three main sources: (1) literature on environmental consultancy and related topics (e.g. internationalization of service companies, multinational consultancies, private actors and global environmental governance), (2) the external image of environmental consultancies (based on information provided by companies' websites and annual reports) and (3) the internal insights into the functioning of the sector based on interviews with officials from the following companies: AECOM, Arcadis, ERM, Grontmij, MWH, Royal Haskoning, Tauw and URS. Furthermore, professionals of some international law firms (Allen & Overy, Baker & McKenzie, DLA Piper and Linklaters) enabled me to make the decision to focus solely on environmental consultants and leave out the global environmental practices of international law firms and international

accountancy firms for reasons of comparability. The names of the interviewees are not listed because of confidentiality. All interviewees are senior professionals with international experience and insights into global developments within their firm and within the sector. Consequently, the information gathered from these conversations does not only reflect the personal opinions of the interviewees, but exposes broader visions.

The discussion is structured as follows: first, a more theoretical section focuses on the role of information and knowledge in global environmental governance. Then, I sketch the environmental consultancy industry. Thirdly, the internationalization of ECFs is discussed, followed by an assessment of their geography. The final section highlights my first conclusions. The message of this paper is threefold: (1) the Information Age transforms knowledge-intensive firms into crucial actors in global environmental governance, (2) ECFs are aware of this evolution and present themselves as strategic partners in global environmental governance, (3) it is time for academics to acknowledge the political role of ECFs and to thoroughly study their potential and limits.

The Information Age and global environmental governance

It is now often stated that, although information and knowledge have been important throughout human history, they have taken on greater importance today. "What is new and rapidly evolving is the explicit management of knowledge and intellectual capital as a strategic resource (…). The ability to learn, adapt and change becomes a core competency for survival" (Ergazakis, Metaxiotis, and Psarras 2006: 68-69) and is "the fundamental characteristic of contemporary competitive dynamics" (Gertler 2003: 76). In his book *Environmental reform in the Information Age. The contours of informational governance,* Mol explores how this relates to changes in global environmental governance. He states that "information and knowledge processes start to become constituting and transformative factors" (Mol 2008b: 83). He relates this to broader societal developments[1] and reflects how this affects the handling of environmental problems. According to Mol, "the information revolution does change the way we deal with the environment". Consequently, issues such as improved communication on environmental information to producers and consumers, e-governance, transparency,

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[1]   - "a new technological paradigm based on information and communication technologies
- globalization
- a redefinition of the nation-state
- disenchantment with science" (Mol 2008b: 84-90)

new channels for environmental activism, etc. are brought to the fore (Mol 2008b: 15). Central in Mol's argumentation is the concept of 'informational governance':

> "the concept implies 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" (Mol 2008b: 277).

Mol does not claim that in the Information Age older forms of environmental governance have become obsolete, but he stresses the need to "understand the logics and backgrounds of (the emergence and functioning of) these innovations and changes in environmental governance" (Mol 2008b: 281-282) because "these new dynamics are 'fitting' the new conditions of our modern order and have not emerged accidentally" (Mol 2008b: 281-282).

In the Information Age, various actors compete with each other over the provision of knowledge en information. Since science "has lost its automatic monopoly position", knowledge and information have become "an object of power struggles and a resource for a wide variety of interests in (environmental) governance" (Mol 2008b: 89). Consequently, market actors take up a role in informational and environmental governance as well (Mol 2008b: 162-188). Literature on knowledge-intensive business services (KIBs) stresses how private actors that are "carriers of knowledge resources and information on problems and solutions" (Miles 2000: 114) are increasingly perceived as vital actors in governance, since knowledge inputs are crucial for dealing with "changing technologies and social conditions" (Miles 2005: 39). Environmental consultants could be seen as information and knowledge providers *par excellence.* Therefore, some scholars start to conceptualize them as "policy entrepreneurs" (Hodge and Bowman 2006: 99) and as "a new advocacy group in its own right" (Hodge and Bowman 2006: 111).

The information revolution has thus originated transformations at the 'supply side' of environmental information (an increased variety of actors providing environmental information, availability of better communication and information technologies, …). But changes have also taken place at the 'demand side'. The demand for environmental information and for guidance is stimulated by a rising awareness of environmental issues, by the complexity of environmental regimes, and by the willingness to spend on environmental protection (ENDS 2008: 3). Meyer points to the

distinct characteristics of environmental consultancy in comparison to other forms of environmental communication:

> "Environmental consultancy is a transfer of environmental information, which is directly oriented towards concrete problems and needs of the target group. The goal of this information transfer from and advice centre to a well-defined group of persons or organisations is to enable them to improve their environmental activities. Contrary to other forms of environmental communication like information campaigns or educational measures which strive for transferring knowledge, environmental consultancy is distinguished by putting the needs of those who are seeking advice into the focus of its work" (Meyer 2002: 363).

Box 1: Concrete problems and needs of target groups determine the information transfer

MWH's *2008 Annual Report* clearly reflects this focus on the customer's needs: every information and knowledge transfer is clearly framed by specific demands, as the following three examples indicate:
A **research project** conducted by MWH assessed the potential impact of underground carbon sequestration from electrical power generation facilities on the quality of groundwater supplies. The project was funded by the American Water Works Association (AWWA) and supported by a consortium of environmental and professional organizations, petroleum interests and some of the largest water utilities in the world. The draft report was AWWA in its official response to a proposed rule by the USEPA that would allow carbon dioxide from electrical power facilities to be injected into deep underground geological formations (p.18).
An **evaluation of remedial options** in the industrially polluted area around La Oraya in Peru by MWH should determine priorities in dealing with historical air, water and soil contamination and includes an assessment of air emissions, dispersion modeling, characterization of contamination, and a human and ecological risk assessment. Future activities will include design engineering and implementation of the first remedial works in priority areas (p. 24).
MWH prepared an **Environmental Impact Statement/Report** for the long-term implementation if the San Joaquin River Restoration Program in California's Central Valley. The goal is to return a self-sustaining salmon population while at the same time minimizing or avoid water supply impacts through water recapture, recirculation, reuse, transfer, and exchange, as the river supplies the near farmland with water (p.27).

Both public and private actors make an appeal to environmental consultants (Hodge and Bowman 2006: 98). International and regional organizations; national and subnational governments; and executive agencies[2] often hire them within the framework of the development and implementation of policies and regulations. The demand for high-level environmental expertise has increased within the private sector due to the change in attitude towards environmental issues (Schulz 2002: 214). Whereas business only dealt with environmental problems when they occurred (e.g. clean-up of pollution) in the 1960s and 1970s, it moved to an attitude of compliance with regulations and some

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[2] An example of such an executive agency in the Belgian/Flemish context is OVAM. "OVAM stands for Openbare Afvalstoffenmaatschappij voor het Vlaams Gewest (Public Waste Agency of Flanders) and is responsible for waste management and soil remediation in Flanders. It is a public Flemish Institution, established after the decree of July 2nd, 1981 covering waste management and prevention" http://www.ovam.be/jahia/Jahia/pid/973?lang=en

companies even developed a more proactive approach, which entails that they go beyond what is demanded by environmental legislation and environmental values are becoming an "integral part of their corporate cultures and management processes" (Berry and Rondinelli 1998: 39). Environmental consultants can be seen as 'agents of greening' that have a significant influence on the development of firms' environmental strategies (Evers and Menkhoff 2004: 130; Schulz 2002: 210).

The environmental consultancy industry

Constraints of definition and demarcation

The first problem researchers face when studying the environmental services sector is demarcating the subject because it is very diverse and lacks a clear identity. "It is less of a sector than an agglomeration of providers of many types of goods, services and technologies that are usually integrated into production processes" (Vikhlyaev 2003: 34). According to the OECD/Eurostat definition,

> "The environmental goods and services industry consists of activities which produce goods and services to measure, prevent, limit, minimise or correct environmental damage to water, air and soil, as well as problems related to waste, noise and eco-systems. This includes cleaner technologies, products and services that reduce environmental risk and minimize pollution and resource use" (OECD 1999: 9).

Although this definition can serve as a point of departure, difficulties remain, especially when one wants to categorize the industry's various activities and services. The same obscurity exists for determining the boundaries of environmental consulting. However, the following premise should be taken into account when developing a clear understanding of this activity: *consulting* signifies providing professional or expert advice. This implies that the focus is on advisory services, which can be distinguished from environmental engineering work or other services that are not part of "a package of environmental advice" (Caldwell and Smallman 1996: 16). The following definition is just one of many, but seems to capture the sector in a rather comprehensive way:

> "Environmental Consulting Services (ECS) – services including environmental audits, assistance with environmental management systems and training, life cycle assessment, environmental impact assessment, advice on environmental regulations and environmental institution building" (JEMU 2002: 17).

Even though environmental lawyers and accountants also provide advisory services and although the major international law firms (e.g. Allen & Overy, Baker & McKenzie, DLA Piper, Linklaters) and international accountancies (e.g. Deloitte & Touch, Ernst & Young,

KPMG, PWC) have established environmental practices, I choose to solely focus on environmental consultants in order to not further complicate comparability. Despite numerous efforts to formulate appropriate definitions and the existence of a consensus on the vague description, it remains challenging to classify the various activities and to draw clear borders between them. There are various reasons for this problematic conceptualization of the environmental services industry in general and environmental consultancy in particular. First, the environmental services industry is characterized by innovation, rapid development and growth. Consequently, it is not easy to keep up with the latest evolutions and to adapt categorizations to ever changing circumstances (Barton 1997: 6). Whereas, for example, today there is a strong demand for services related to carbon emission reductions and sustainable energy, hardly anyone inquired them just a couple of years ago (Interviewees). Second, the sector is inherently diverse. As will be discussed further below, various firms – both MNCs and SMEs – are active and offer a broad range of services and products (ENDS 2006: 11). These companies have different backgrounds and operate in particular national or regional contexts. This influences their way of working, specializations, organizational structure etc. (Hill 2004: 380) and renders it more difficult to formulate comparisons at the international level (Umweltbundesamt 2006: 15-16). Third, it is very hard to draw boundaries between the various services, and thus it is almost impossible to clearly define what activities environmental consultancy covers. The reasons for this are the unregulated character of the industry (Caldwell and Smallman 1996: 19), the "poor representation as a sector in its own right" (Vikhlyaev 2003: 34) (e.g. "professional and trade associations are less well developed for environmental services firms than for other KIBS" (Miles 2000: 116)) and the multiple-purpose character of various activities and services (i.e. only a part of the services and products can be labeled to be purely 'environmental consulting') (ENDS 2006: 11; OECD 1999: 7; Umweltbundesamt 2006: 15-17). As a consequence, there does not exist a single, widely accepted categorization for the industry's activities, nor are there clear-cut boundaries (ENDS 2006: 11).

Box 2: The lack of a clear definition complicates estimations on the environmental consultancy sector's dimension

Looking for numbers on the environmental consultancy sector's dimension, I came across the following table in the 2008 ENDS Consultancy market guide:

TABLE 1 TOP ENVIRONMENTAL CONSULTANCY FIRMS*					
UK env. turnover	Number of UK env. staff	Number of UK group staff	Number of global env. staff	Number of UK env. contracts	Number of global env. contracts
>£70m					
AEA	489	733	496	869	972
Jacobs	1,040	4,600	1,040	4,000	4,050
MWH	1,350	1,400	6,900	2,200	15,500
Mouchel Group	1,500	11,000	1,830	500	570
RPS Group	2,255	2,255	3,750	11,000	18,300
£60-70m					
Atkins Water & Environment	1,300	17,000	1,500	1,700	2,100
Entec UK	780	780	780	1,156	1,225
£50-60m					
Hyder Consulting (UK)	600	1,600	950	800	1,250
RSK Group	620	620	700	2,800	3,100
£40-50m					
Faber Maunsell	560	2,800	2,500	2,700	5,000
WSP Environment & Energy	485	2,760	1,050	7,500	10,500
£30-40m					
Environmental Resources Management (ERM)	385	385	3,000	1,500	16,500
Halcrow Group	900	6,500	1,200	400	650
Mott MacDonald	180	4,091	450	300	750
White Young Green Environmental	425	2,288	425	3,000	4,000
£20-30m					
Adas UK	450	650	450	1,000	1,000
Arup Group	255	4,141	315	200	250
Bureau Veritas	400	1,750	1,800	3,800	17,000
Enviros Consulting	400	450	9,000	1,450	1,600
Golder Associates (UK)	250	250	5,500	1,000	25,000
Grontmij	175	1,000	628	500	3,000
Scott Wilson	220	2,300	360	6,500	11,500
SLR Consulting	290	320	600	1,000	1,500
URS Corporation	295	1,000	11,900	1,800	29,000
£10-20m					
AMEC (Earth & Environmental UK)	210	14,000	3,600	600	50,000
Environ	160	180	1,100	1,660	7,000
Parsons Brinkerhoff	300	2,000	900	350	900
Waterman Group – Environmental Consultancy	189	1,899	199	1,130	1,200

*In alphabetical order by declared turnover in ENDS Consultancy Survey June 2008/ENDS Directory 2008. See also, pages 14-15. Further details on all the above consultancies, including contacts, work area/client sector experience at www.endsdirectory.com

However, the interviews revealed that numbers on "global environmental staff" often include both engineers and consultants, and consequently do not reflect the size of the global environmental consultancy sector. We thus need to be careful with existing estimations. Let me explain this with regard to four companies mentioned in the ENDS table. For a company like ERM there is no problem, because it is one of the few 'pure' environmental consultancies (ENDS 2006: 23). Thus the number of global environmental staff will indeed reflect the number of professionals involved in environmental consulting. For URS Corporation uncertainty exists, because for this company environmental consulting is only a small part of the total package of services it delivers, especially in the US. 11,900 global environmental staff on a total of 55,000 people might be correct, but could not be confirmed by the interviewees. For MWH the numbers in the table are problematic. It refers to the total amount of employees of MWH, of which 450 are involved in mining and the rest is divided over engineering and consulting. AECOM, which is formed by many engineering, design, environmental and planning companies (a.o. Faber Maunsell), now has 45,000 employees of which more than 5,000 are environmental professionals.

A brief overview of the industry's origin and evolution and a sketch of today's market further illuminate what we understand under the environmental services industry and environmental consulting.

Origin and evolution

Since its inception some decades ago, environmental consulting has gone through some major evolutions in terms of providers, services, customers and geographical spreading. Before the establishment of today's largest environmental consulting firms (e.g. ERM) in the early 1970s, environmental consulting was a task for engineering firms and academic/research institutions (ENDS 2006: 10). In the 1990s, the sector boomed. The unregulated character of the industry (Caldwell and Smallman 1996: 19) and the low barriers of entry (ENDS 2008: 9) explain for the current diversity (Yuracko and Hewitt 2003: 42). Both 'pure' environmental consultancy firms and companies that also provide other services (e.g. engineering, architecture, planning and development) constitute the

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Box 3: Diversity within the environmental consultancy sector: ERM – Golder – AECOM

The analysis of three global ECFs' services highlights the diversity within the sector. ERM, Golder and AECOM all work in over 100 countries and have offices in 35 to 45 countries. ERM was founded as an environmental consultancy in the seventies, Golder was established in 1960 as a ground engineering firm and AECOM started as a small firm in 1990, but is now the brand name for over 30 engineering, design, environmental and planning companies. The table shows how they present themselves (profile) and how they list their (categories of) services on their official websites.

	ERM	Golder	AECOM
Profile	"Provider of environmental, health and safety, risk, and social consulting services"	"Services related to ground engineering and environment"	"Providing professional technical and management support services" Purpose: "enhance and sustain the world's built, natural and social environments
Services	Transaction services Impact assessment & planning Contaminated site management Performance & assurance Sustainability & climate change	Air/acoustic/noise Biological sciences Construction (materials) Cultural sciences Decommissioning/demolition EHS compliance & management systems Energy & renewables Environmental & social impact assessments Geochemistry & geophysics Geotechnical engineering Groundwater/hydrogeology Industrial hygiene Health/environmental risk assessment Information management M&A due diligence Ore evaluation services Permitting & stakeholder engagement Planning/design/landscape architecture Project/program management Property development Site remediation Surface water/sediments Sustainability Tailings management Toxicology Tunneling Waste management Wastewater treatment/Process engineering	Architecture Building engineering Design & planning Economics Energy Environment Government Program Management Transportation Water

www.erm.com, www.golder.com, www.aecom.com

sector (Bifani 1996: 11; Caldwell and Smallman 1996: 15; OECD 1999: 7; Schimming, Schulz, and Maier 2007). The degree of concentration has risen (Bifani 1996: 11; ENDS 2006: 11) and further polarization will occur, with big companies "getting bigger on larger scale contracts and economies of scale, and small firms growing in niches and geographical regions" (Yuracko and Hewitt 2003: 42).

Within the environmental services industry environmental consulting has gained relative importance (Interviewees). Whereas in the past the focus was on environmental infrastructure services, environment-related support services have now come to the fore (OECD 2005: 97, 115). Within Arcadis, for example, the "Environment" pillar has doubled in the past four years and is now as big as the "Infrastructure" pillar, thus providing 37% of the gross revenue (Arcadis 2008: 6, 7). Furthermore, environmental consulting moved from limited and informal advice on environmental effects of a project to environmental impact assessments, corporate environmental audits and management systems in the 1980s, annual environmental reporting by large companies and attention for environmental liability and risk in the 1990s to issues of corporate responsibility, brand management and sustainability (ENDS 2006: 10).

Environmental consultants' clientele has expanded throughout the years. Whereas in the 1970s and 1980s, only a couple of industrial sectors (e.g. petrochemical and waste management) were seeking advice, today, industry in its broadest definition makes an appeal to environmental consultants. And apart from various governmental levels (from municipalities to national governments) and international bodies like the World Bank, also real estate developers, insurance companies and many others hire these experts (Ball and Maleyeff 2003: 18; ENDS 2006: 26). Clients can be both local or global and can have local or global problems (Morgan, Sturdy, and Quack 2006: 34). Assistance offered by environmental consultants can be both short-term (e.g. project assessment) and long-term (e.g. program management and implementation) (Horberry and Le Marchant 1991: 383-385). Whereas in the past the US, Europe and Japan have been the most important environmental markets (Sam 1999: 83; Umweltbundesamt 2006; Yuracko and Hewitt 2003), today, various environmental consultancies are operating worldwide, both in the 'Global North' and the 'Global South' (ENDS 2008; Interviewees; Vikhlyaev 2003: 36-37).

Driving factors of market development

Three sets of reasons explain for the expansion the sector has experienced during the past two decades (ENDS 2008: 3). A first and well recognized driving force is the adoption of environmental norms, standards and regulatory frameworks (Caldwell and

Smallman 1996: 17; Hayter and Le Heron 2002: 22; Interviewees; Miles 2000: 104; Vikhlyaev 2003: 36-37). New environmental legislation and agreements at the national and supranational levels force governments and companies to live up to new expectations (Moser 2001: 299; OECD 2005: 115). The adoption of worldwide environmental standards arouses the growth of international environmental markets (Schulz 2005: 340; Umweltbundesamt 2006: 59). However, regulatory uncertainties (e.g. successful registration of projects under CDM, delayed operation of key elements of the Kyoto Protocol) hinder market development, as the difficult expansion of carbon markets shows (Interviewees; Knox-Hayes 2009: 11). Second, various financial and economic reasons may be a motive for clients to hire environmental consultants. Companies are paying more attention to the financial implications of environmental liabilities, consider costs and competitive advantages and are confronted with tax policies (Caldwell and Smallman 1996: 17; ENDS 2006: 5; Stone 2000: 23; Vikhlyaev 2003: 36-37). Furthermore, the international donor community "tailor[s] the economic development programs they support to sound environmental management practices" (Sam 1999: 12). Also "more general economic evolutions, such as fast-growing markets in East and South East Asia, Latin America and Central and Eastern Europe" play a role (Schulz 2005: 340). In line with this, it remains to be seen how the sector will be affected by the global financial crisis (ENDS 2008). Third, the rising awareness of environmental issues makes companies integrate environmental values and sustainable development into their corporate strategies either because of consumer pressure and brand reputation[3] or because of ethical and moral considerations (Caldwell and Smallman 1996: 17; ENDS 2006: 5; Hayter and Le Heron 2002: 22; Miles 2005: 45; Moser 2001: 301; Vikhlyaev 2003: 36-37).

Box 4: Private companies engaging in environmental governance with the help of ECFs

An example of how multinational private companies engage in global environmental governance with the help of an ECF, is the case of Tesco, the third largest grocery retailer in the world. The company joined the Carbon Trust's product carbon footprinting and labeling initiative, thus engaging in raising consumers' carbon literacy and help customers reduce their carbon footprint. The company applied to ERM's services in order to develop systems to capture and record complex supply chain footprint data. Today, 20 Tesco own-brand products carry the Carbon Trust's Carbon Reduction Label.
www.erm.com/Analysis-and-Insight/Case-Studies/Case-Study-Tesco

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[3] "In the Information Age, reputational capital of the private sector, often crystallised in logos and brands has been the key target of both green activists and private companies, as Nike, Shell, Exxon, Microsoft and numerous other companies have witnessed" (Mol 2008: 203).

'Global' ECFS?

The analysis of a ECFs' global activities reveals to what extent these companies indeed can be conceptualized as actors in global environmental governance. 'Active on a global scale' stands for operating in a variety of countries through an established staff and office. Very little ECFs have (equally strong) operational bases on all continents, but various firms are present both in the 'Global North' and in the 'Global South', which is why I categorize them as being active on a global scale[4]. In line with Morgan et al. (Morgan, Kristensen, and Whitley 2003), the internationalization of companies is not so much approached as a rational strategy of the headquarters, but more as a consequence of globalization processes (Kristensen and Zeitlin 2003: 189). This implies I do not analyze ECFs in isolation, but I link the creation of their worldwide markets and activities to other societal developments, such as the increased possibilities in international communication, the globalization of production and consumption processes etc. (Meyer 2003: 301-302).

This section discusses what is understood by internationalization and formulates some critical reflections on the 'global' character of global ECFs. As not much has been written on internationalization of environmental consulting, insights are derived from interviews and literature on multinational firms (Morgan, Kristensen, and Whitley 2003), global service companies (Aharoni and Forsyth 1996b), multinational consultancies (McKee, McKee, and Garner 2005; Morgan, Sturdy, and Quack 2006) and the internationalization of environmental services (Schulz 2005).

Internationalization: what, how and why?

Today's global ECFs all started as smaller, national companies and incrementally internationalized their practices. But what does this mean? It involves more than the simple reproduction of existing structures and practices (Morgan 2003: 1-2) and can occur in various ways. Literature on the internationalization of services has identified four different modes:

> *cross-border supply*: only the service itself crosses a national border and a
> geographical separation between provider and client is maintained
> *consumption supply*: the client moves towards the service provider

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[4] Contrary to Taylor's definition of a global service firm ("global service firms can be defined as having offices in at least 15 different cities with at least one in each of the prime globalization arenas; Northern America, western Europe, and Pacific Asia" (Taylor 2001), I think that it is necessary for a company to be present in both the 'Global North' and the 'Global South' before we can categorize it as a global firm.

commercial presence: the service is supplied through the commercial presence
of a foreign supplier (this can be realized with local staff or via partners, e.g.
subsidiaries, branch offices)

presence of natural persons: movement of domestic personnel towards the
client's country (this can be permanent or not, e.g. highly specialized engineer
working on a client's plant for a longer time) (Morgan, Sturdy, and Quack 2006:
12-13; Schulz 2005: 338-339)

Commercial presence and presence of natural persons are central to the
internationalization of global ECFs, which organize their activities through worldwide
office networks and project-based presence. That this geographical spreading serves
distinct goals and reflects different realities and ways of operation is clarified by the
distinction made by Barlett and Goshal between four types of global firms:

Multinationals: "decentralized firms, highly sensitive to local conditions but
with subsidiaries weakly linked together across nations and divisions"

Global companies: "firms insensitive to local conditions and dependent on
centrally determined plans and processes to produce global products, that
could be produced and sold with minor variations in any country"

International companies: "possess core competencies which are generated
and renewed centrally but are transferred/adapted to local contexts"

Transnational companies: "dispersed, interdependent and specialized with
differentiated contributions by national units to integrated worldwide
operations and knowledge developed jointly and shared worldwide"(Morgan
2003: 7).

All four types can be found amongst ECFs. In every way, global presence through local
anchoring leads to complex internal relations and interactions (Interviewees).
Therefore, Nohria and Ghoshal understand a transnational company as a "differentiated
network", which is characterized by "different types of relationships: the 'local' linkages
within each national subsidiary, the linkages between headquarters and the
subsidiaries, the linkages between subsidiaries themselves (…). [T]his complex and
multifaceted pattern of relationships is seen as providing the company with the means
to innovate rapidly for national, regional, and global markets, as well as to maximize the
efficiency of its operations by locating production, R&D and marketing/sales efforts
wherever is most appropriate" (Morgan 2003: 7). Indeed, ECFs claim that the
combination of global presence and local anchoring allows them to offer the client the
best services: the company has an international knowledge network but is also familiar
with local conditions and practices and has build up both global and local contacts
(Companies' websites and Interviewees).

Globalization processes and accompanied developments (e.g. improved communication infrastructure, mobility of experts, increased standardization of services, …) may facilitate conditions for firms to internationalize (Morgan, Sturdy, and Quack 2006: 3; Schulz 2005: 337). However, this does not mean that barriers are absent. Regulatory frameworks, for example, can hinder the tradability of services (Morgan, Sturdy, and Quack 2006: 14-17) or put constraints on the activities of foreign businesses. Furthermore, access to public contracts is not always possible, trust and reliability must be assured and there is a need of reputation, financial and human resources (Schulz 2005: 342-343). Also, instable local contexts (politically or economically) can restrain permanent presence in particular places (Interviewees). Above all, (national) legal frameworks are crucial for the environmental consultancy industry: there needs to be a legal framework that pushes actors for environmental improvements and there needs to be a sanctioning mechanism in place that can enforce compliance. When these conditions are fulfilled, a demand for environmental consulting and markets can develop (Interviewees; Moser 2001: 305).

Internationalization of operations often results from "client following" (Schulz 2005: 338-339), either because there is the opportunity to work on a single big project in a particular country or because a customer has decided to internationalize its own activities and asks for global provision of services (McKee, McKee, and Garner 2005: 19; Schulz 2005: 341). A "market seeking approach" (Schulz 2005: 338-339) can drive expansion of an ECF's operational bases too. Firms may find saturated domestic markets and look for new opportunities (Aharoni 1996: 14; Schulz 2005: 341). Stimulus can also come from governments, supranational actors (EU) and international organizations (Aharoni 1996: 14; Schulz 2005: 341).

Market opening occurs via cooperation ("building an alliance with a foreign partner who offers complementary environmental services"), organic growth ("through 'greenfield' investments in the host country and successive expansion of the activities in the new market, reputation and 'own' client networks can be built up"), or acquisition ("opportunity to take over both the existing infrastructure and client networks of the acquired firm as well as the latter's reputation")(Schulz 2005: 340). Lastly, firms can also "poach senior consultants from other firms with existing client contacts in a particular region" (Morgan, Sturdy, and Quack 2006: 14-17).

Most importantly, internationalization is linked to a firm's competitiveness, survival and reputation (Aharoni 1996: 14; Aharoni and Forsyth 1996a: 3; McKee, McKee, and Garner 2005: 19; Morgan, Sturdy, and Quack 2006: 6; Schulz 2005: 341): "The companies construct their global identity as key to their ability to serve their clients in a number of ways" (Morgan, Sturdy, and Quack 2006: 20-24). In summary, these firms claim to offer "economies of scale, of scope, of repetition and of learning" (Morgan, Sturdy, and Quack 2006: 20-24). However, most scholars stress that "there is rarely a well-reflected evaluation process before trying to enter a foreign market" (Schulz 2005: 341).

Box 5: How a company's background determines location strategies

When asking about location strategies, all interviewees stressed the complex dynamics behind them. Apart from the differences in expansion approaches (organic growth versus growth by mergers and acquisitions), two other factors were mentioned repeatedly to explain for the diversity. On the one hand, the company's ownership structure: MWH, for example, is an employee-owned company, which makes it more risk averse than a company like URS, which is listed on the New York Stock Exchange. On the other hand, the company's home country: a comparison between the office locations of a US-based (URS), a Netherlands-based (Royal Haskoning) and a France-based (Sogreah) company highlights how this factor is of importance. Several interviewees mentioned how Dutch companies find difficulties in establishing permanent presence in Latin America, because of cultural differences. US companies cannot operate in particular countries in the Middle East because of public concerns in their home country and are not keen to establish offices in Africa (project based work, however, is possible). French companies, to the contrary, have a strong link with former French colonies and thus find it easier to establish strong presence in Africa.

	URS	Royal Haskoning	Sogreah
Offices in:	Argentina	Bahrain	Algeria
	Australia	Belgium	Belgium
	Azerbaijan	Cambodia	Bulgaria
	Belgium	France	China
	Bolivia	India	Cyprus
	Brazil	Indonesia	Egypt
	Canada	Ireland	France
	China	Libya	Italy
	France	Malaysia	Madagascar
	Germany	Netherlands	Morocco
	Ireland	Nigeria	Philippines
	Italy	Romania	Poland
	Mexico	Russia	Romania
	Netherlands	Thailand	Ukraine
	New Zealand	Trinidad & Tobago	United Arab Emirates
	Panama	United Arab Emirates	United Kingdom
	Qatar	United Kingdom	
	Saudi Arabia	United States of America	
	Singapore	Vietnam	
	Spain		
	Sweden		
	United Arab Emirates		
	United Kingdom		
	United States		

www.urs.com, www.royalhaskoning.com, www.sogreah.fr

Questioning the 'global' character

The consequences of the internationalization of service firms can be discussed at two levels: the level of the customer (delivery of products/services) and the level of the company (changes in organizational structure). Scholars diverge in their evaluation of what happens at the customer level. Some claim that homogenization and standardization of products and services occurs (McKee, McKee, and Garner 2005: 19). Others state that knowledge intensive firms sell expertise and consequently offer customized and specialized products and services, even when they operate on a global scale (Aharoni 1996: 15). The adaptations at the company's organizational level then are related to the management of the "flow of people, information, services, and money across national borders" (Aharoni 1996: 20). "New organizational structures and relationships are being designed and implemented" (Aharoni and Forsyth 1996a: 3) and location strategies are developed (e.g. "operate out of locations in major international service centers from which teams of specialized professionals can be dispatched on project specific bases" (McKee, McKee, and Garner 2005: 21)). As mentioned earlier, transnational companies are (increasingly) characterized by complex relationships between the various constituent parts. As a consequence, their organizational structures can be conceptualized as "multinational networks" (Post 1996: 80). However, this change towards "heterarchy" (instead of hierarchy) (Morgan, Sturdy, and Quack 2006: 8-12) confronts firms with challenges. Morgan et al. categorize them as follows:

> *the subsidiary autonomy debate*: global consultancies are federations of national partnerships and 'global' control on national context varies
>
> *the MNC governance debate*: how to manage and govern relations between the various constituent parts? 'Global' governance is generally weak
>
> *the coordination costs debate*

They state: "so long as firms at different points can create mechanisms which allow cooperation and communication across boundaries, the network model reduces coordination and transaction costs whilst enhancing innovative capacities". But, "it is not at all clear how these problems of governance can be resolved in ways that do not simultaneously undermine what are perceived as the main advantages of the MNC" (Morgan, Sturdy, and Quack 2006: 8-12, 32-33).

This brings us to the question how 'global' such firms really are. According to Morgan et al. the three abovementioned debates make that these firms do not necessarily "deliver on the 'transnational solution' (…) where it delivers is in terms of reputation" (Morgan, Sturdy, and Quack 2006: 33). Indeed, it is often more about

providing the best services possible to a specific customer in a specific setting, than about spreading global practices, norms and standards (Interviewees).

In the Information Age, "inherent quality of information is not seen as decisive, but, rather, the quality and trustfulness of the information provider and generation [...] truth has thus become a social relation and as such an essential part of the solution for dealing with informational uncertainties" (Mol 2008b: 152). Hence, firms put a lot of effort in convincing potential clients that they are truly global actors, because this increases their credibility and trustfulness (Interviewees). For that purpose, ECFs have also developed global knowledge bases through virtual peer group communication and information dissemination and the organization of face-to-face interaction through the circulation of key personnel (Gertler 2003: 88; Knox-Hayes 2009: 6). This is possible, because in the Information Age, "organizational or relational proximity and occupational similarity are more important than geographical proximity in supporting the production, identification, appropriation, and flow of tacit knowledge" (Gertler 2003: 86). This information exchange allows for the development of global practices. A global ECF can decide that it is committed to particular minimum standards and minimum performance, for example by having a global template to carry out Environmental Impact Assessments. However, research has pointed out that the separation between headquarters and branch offices hinders the application of global operating standards (Moser 2001: 300). Furthermore, some services depend much on local legislative requirements, which shuts the door to standardization (Interviewees). Another channel through which global practices can be spread is global clients demanding ECFs to apply the same (high) standard to all their sites around the world (Interviewees).

Global ECFs' geography

"The rapid growth and growing importance of environmental services providers suggests a need for a better understanding of the economic geography of these activities" (Schulz 2002: 210). Global ECFs have organized their operations through worldwide office networks, which can be structured in a more hierarchical or a more horizontal way, depending on the company's strategy (Interviewees). By means of these office networks, attitudes and strategies related to environmental values are spread throughout the world, which is a concrete manifestation of globalization processes[5].

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[5] Whitley defines globalization as "a process of increasing integration of national and regional economies, such that decisions, activities, and competitive strategies in one part of the world are closely linked to those in other parts". According to him, "MNCs are central agents of such

Literature on networks, flows and global cities offers a useful theoretical and conceptual framework to examine this, as it stresses "process, connectivity and mobility at the expense of an alleged former focus on boundedness, hierarchy, and form" (Simonson 2004: 1333). Networks are the organizational form through which flows of information, money, ideas, etc. are exchanged and actors and places are connected. Mol recognizes that the emergence of informational governance occurs in different forms and with a variety in speed (Mol 2008b: 289). Not every place is equally connected to informational flows and networks; to the contrary (Audirac 2003: 18). But, it is a global phenomenon we are talking about and cities have a particular role in it. "The global informational networks and flows connect and integrate developed parts of the world with specific key nodes, hubs, places and practices in the lesser developed countries and regions. Although we can still claim that sub-Saharan Africa and developing countries in Asia are poorly connected to the World Wide Web, specific localities and specific practices [...] in these regions manage to connect well to the informational highway or even become a hub (e.g. metropolises)" (Mol 2008b: 235). Cities are thus conceptualized as places that concentrate vital knowledge (Ergazakis, Metaxiotis, and Psarras 2006: 77), infrastructure and services (Taylor 2004), as "focal points in knowledge production and diffusion" (Schamp 2002: 357) and as the sites where globalization processes materialize (Sassen 2009). Therefore they are called global cities. "The growth of fast communication, global flows, and linkage into national and international institutional life has increased the city's connections and rendered necessary its theorization as a site of global-local connectivity, not only a place of meaningful proximate links" (Simonson 2004: 1335). As said, "in order to provide a 'seamless service', global service firms have to organize provision in cities across the world. In this way, world cities are interlocked through the activities of service firms servicing their global clients" (Taylor 2001).

Initially, the literature on global cities focused on cities' role in processes of economic globalization (e.g. Friedmann 1986; Sassen 2001; Taylor 2004). Today, research has broadened to issues of political and cultural globalization as well (e.g. de Baan, Declerck, and Patteeuw 2007; Short et al. 2000; Taylor 2005). However, "the global city as an environmental issue is one of the great silences of the global city research activity of the past twenty years" (Short 2004: 20). The agency of local governments in global environmental governance is receiving increased attention (e.g. Betsill and Bulkeley 2004; Keiner and Kim 2007; Kern and Bulkeley 2009; Toly 2009),

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integration since they coordinate and control operations in many different parts of the world through unified authority and ownership structures" (Whitley 2003: 27)

but the idea of cities as strategic places for global environmental governance (because they concentrate vital actors, knowledge, services) has not been explored that much. Sassen hypothesizes that the organizational architecture of the global economy – i.e. the transnational urban network emerging from the linkages between global cities – can serve to ensure environmental sustainability. More concretely, high environmental norms and standards could be distributed via the private, corporate actors within global cities (Sassen 2005). However, she has not paid attention to the role of private environmental actors, like environmental consultants. The examination of some global ECFs' geography should reveal to what extent they have a converging organizational architecture with that of the core players in the global economy (e.g. financial institutions) and what the reasons are behind location strategies. Cities are places of "engagement in plural politics and multiple spatialities of involvement" (Amin 2002: 397). Consequently, they are also a battleground for the gaining of influence. Previous research on the geography of global ENGOs (Bouteligier 2009), made clear that the office grids reflected a distinct network. ENGOs seemed to have a variety of reasons (political, economic, pragmatic, historical) to establish offices in particular places. As a consequence, a less concentrated and more diffuse geography emerged. The examination of the office networks of ECFs can increase further insights into the geographies of global environmental governance. It should be noted, however, that such geographies are "permanently in a state of flux. At best, we can capture snapshots of their development and spatial form" (Grant and Nijman 2002: 337).

Although the histories and the specific institutional roots influence (Hill 2004: 380, see Box 5) each firm's office network, it is possible to distinguish some common characteristics. First of all, a set of factors that influence the location choices can be identified. As "the production, acquisition, absorption, reproduction, and dissemination of knowledge is seen by many as the fundamental characteristic of contemporary competitive dynamics" (Gertler 2003: 76), "firms are said to be increasingly keen to invest in those regions where lots of tacit knowledge[6] is produced and shared" (Gertler 2003: 81). This is because, in times that "everyone has relatively easy access to explicit/codified knowledge, the creation of unique capabilities and products depends on the production and use of tacit knowledge" (Gertler 2003: 79). In other words, ECFs are present in environments where they will find enough highly-skilled employees and where there are "urban communities of practice" (Knox-Hayes 2009: 5) that foster

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[6] "articulated knowledge contains knowledge that is relatively easy to describe and codify (…) tacit knowledge contains knowledge that is difficult to articulate and describe for other people" (Birkinshaw 2001: 178)

knowledge dissemination, learning and innovation (Ergazakis, Metaxiotis, and Psarras 2006: 79; Interviewees). The concentration of ECFs with different specializations in particular cities can be explained by the issue of market complementarity (Knox-Hayes 2009: 6) and the need for direct market access (Neal 2008: 95, 98). The demand of ECF's global clients to be present in particular places also plays a critical role (Interviewees). Multinational companies prefer proximity of their global partners and subcontractors (Audirac 2003: 20; Grant and Nijman 2002: 331-332). Second, although the geographic spreading is distinct for every global ECF, an increased attention for Asia, and particularly China, can be observed. This boosts the importance of some Asian cities, as they are the places where local markets and "global flows of information and ideas" intersect (Taylor 2001; Taylor et al. 2002: 238). Third, Africa is 'off the map'. ECFs do undertake projects on the African continent, but have no or very little established offices there. This can largely be explained by the risk aversion of companies (Interviewees) and the absence of a significant middle class and an advanced urban economy (Short 2004: 51). Furthermore, 'enclaves of investment' in Africa are "usually tightly integrated with the head offices of multinational corporations and metropolitan centers but sharply walled off from their own national societies" (Ferguson 2006: 36) with little involvement of the local population (Abu-Lughod 1996: 199).

Conclusion

In this paper, I have sketched the role of the environmental consultancy industry in order to provide a first onset for conceptualizing these firms as actors in global environmental governance. More research is needed to refine the analysis. However, this is a challenging effort since not many studies exist and the sector is not transparent because of competitive issues. Consequently, the examination depends on the willingness of interviewees to share information. Up to now, I have experienced much openness, but a foreseen problem is that this openness will decrease when questions become more specific.

My first conclusions can be summarized by coming back to the three-fold message I mentioned at the beginning of the paper: (1) the Information Age transforms knowledge-intensive firms into crucial actors in global environmental governance, (2) ECFs are aware of this evolution and present themselves as strategic partners in global environmental governance, (3) it is time for academics to acknowledge the political role of ECFs and to thoroughly study their potential and limits.

Indeed, ECFs contribute to global environmental governance in several ways. First of all, in the past as well as today, ECFs are involved in the creation of policies through, for example, assessment studies. In other words, they are at the source of norm creation. Secondly, ECFs help other actors implement national and international commitments. Thirdly, ECFs identify and solve problems, which is exemplified by one of the sector's oldest services: contaminated site management. Lastly, ECFs have a large role to play in spreading practices. As they need to sell their services, they convince their clients that it is beneficial to adopt an environmental risk aversion attitude and that it is useful to, for example, calculate carbon footprints, report on sustainability practices, etc.

ECFs are aware of their strengths and capacities and present themselves as key partners in global environmental governance through various channels (websites, reports, publicity, informal contacts, lobbying, …). Most importantly, they are private actors that are constantly seeking for new market opportunities. In other words, they actively mould their image and role in global environmental governance. Stressing the link between the local and the global is an essential part of this process.

However, ECF's role in global environmental governance is not without controversy. Environmental consultants have been criticized for the services they provide to the private sector, especially to clients in the oil and mining industry. ENGOs have claimed that advises and assessments sometimes are too 'soft', allowing for business to state that their practices do not harm the environment even when they do. Protest of environmental activists against ERM in 2001 and against AEA in 2008 concerning the provision of Environmental Impact Assessments that allowed for the construction of the Baku-Ceyhan pipeline (BP) and the Sakhalin oil and gas development (Shell) are just two examples of ENGOs (Earth First! and Pacific Environment) accusing environmental consultants to write greenwash reports (Earth First! 2002a, 2002b; Pacific Environment 2008). In an era in which environmental authority is also located in the private sector (Mol 2008a), the issue of legitimacy is a widely discussed and central element. Because of this controversy and because of the inherently dynamic character of the sector, it is necessary for academics to further study ECFs' role. This will require a more in-depth analysis of ECF's activities, but also an investigation of the relations between ECFs and other actors in global environmental governance (e.g. IOs, NGOs, financial institutions, …) in order to demarcate their contribution to and relative position in global environmental governance.

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