EUROPEAN REPORT ON DEVELOPMENT

ROLES OF COMPANIES IN WATER MANAGEMENT – EXTENDING THE BOUNDARIES OF PRIVATE SECTOR RESPONSIBILITY?

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MOBILISING EUROPEAN RESEARCH
FOR DEVELOPMENT POLICIES

SYNOPSIS

This background paper reviews development in water use and management by looking at example companies in selected sectors that make significant use of water. It responds to the ERD brief to 'examine appropriate roles for the private sector and public sector in effective natural resource management' in the context of 'increased natural resource scarcity and climate change'.

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odi Overseas Development Institute

d·i·e Deutsches Institut für Entwicklungspolitik German Development Institute

European Centre for Development Policy Management ecdpm

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Contents

Boxes

Abbreviations

CEO	Chief executive officer
CSO	Civil society organisation
DIE	*Duetsches Institut Für Entwicklungspolitik*
ECDPM	European Centre for Development Policy Management
ERD	European Report on Development
EU	European Union
GIS	Geographical information system
GIZ	German Development Agency
HSAF	Hydropower Sustainability Assessment Forum
HSAP	Hydropower Sustainability Assessment Protocol
ICMM	International Council of Mining and Metals
IHA	International Hydropower Association
IPIECA	International Petroleum Industry Environmental Conservation Association
KPI	Key performance indicator
MNC	Multinational Company
NGO	Non-governmental organisation
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
PAP	Project-affected persons/populations
PPP	Public–Private Partnership
ToRs	Terms of reference
UN	United Nations
US$	Dollars of the United States of America
WBCSD	World Business Council for Sustainable Development
WC	Water closet (example of sanitary facilities in tourist accommodation)
WEF	World Economic Forum
WEL	Water, energy land
WRM	World Rainforest Movement
WWF	World Wide Fund for Nature

Executive summary

This background paper reviews development in water use and management by looking at example companies in selected sectors that make significant use of water. It responds to the ERD brief to 'examine appropriate roles for the private sector and public sector in effective natural resource management' in the context of 'increased natural resource scarcity and climate change'. The management challenge to be addressed in the ERD is that those roles 'ensure transitions to inclusive and sustainable growth in developing countries'.

The focus of this paper is on what the private sector is doing – on the evolution of private companies' voluntary actions in water 'use' and 'management', including both unilateral actions and collaborative actions with government and other stakeholders. By 'voluntary' we refer to action that is not imposed by law or regulation, or led by government policy.

The presence in developing countries of multinational companies (MNCs) in the selected sectors brings economic activity and jobs, but also makes demands on natural resources, including water.

Examples of private sector innovation in water *use* are set out in section 3. The companies consulted are working to evaluate their water use and initiating actions to reduce (unit) volumes used in their operations. Savings in water usage, making the best of increasingly available technologies, can help reduce pressure on water resources and go some way to alleviate water scarcities. Private sector efforts may also include companies influencing their *suppliers* to reduce water use. In tackling the latter task, the companies consulted are to date considerably less advanced. Nevertheless, in relation to achieving water-use efficiencies, the private sector has a major and critical contribution to make.

Examples of private sector innovation in water *management* are set out in section 4. Companies are assessing 'water risks' arising outside their premises/processes and those of their suppliers, and looking to protect themselves from those risks. Risk management includes – according to the company policies consulted and comments of key informants – maintaining satisfactory relations with populations living close to company plants or premises. According to the companies, entering into voluntary agreements to support projects that provide funding for local water projects and/or compensate local communities for the impact of company activities makes good business sense. As well as offering some benefits to local people, those actions are also clearly designed by companies to provide themselves with a *reputational* 'buffer'.

As for the *boundaries* of private sector responsibility, based on this initial review (i.e. the documentary study and interviews) it is clear that companies do not wish to assume the functions of 'water resources managers' in the sense employed by public policy-makers. This is how the term water 'management' is employed in this paper (defined in section 3.1). We observed a difference between how business executives talk about (focused or targeted actions in) 'water management' and how public policy-makers refer to 'water resources (plural) management'.

The *core* of those public functions is establishment and oversight of the system of allocating water resources between competing uses, across whole catchments and river basins. That 'system-wide' role (section 7.1) will remain the responsibility of governments, despite the current lack of capacities in many developing countries – the so-called public 'governance gap'. The examples of practice reviewed here indicate that private sector engagement is aimed at undertaking activities that *stop short* of assuming that broad public responsibility.

How far companies intend to expand their water-management activities *towards* that responsibility is not entirely clear, however. Based on the review on which this paper reports, companies' actions in the vicinity of their plants/premises appear to be acts of either charity or compensation for impacts on defined and *limited* groups of recipients, rather than open-ended assumptions of responsibility to the general public.

The extent to which a company is public-minded depends fundamentally on its constitution and how the latter is interpreted and applied. Companies are not creatures of nature, but *legal and social constructs*, established and operating within frameworks of company law and (where they are publicly quoted companies) codes of stock exchanges. Those rules and codes set the parameters of what each company is for, and for whom. A key step, therefore, in this examination of a possible 'boundary-shifting' evolution of private sector roles into areas of activity normally associated with *public governance*, is to consider the extent of companies' roles and responsibilities according to corporate models and *corporate governance*. Corporate governance determines how companies and their activities are directed, and in particular how they relate to their sources of finance, including the holders of shares (or other units/parts in the companies' capital).

To illustrate different corporate models, this paper cites three examples from EU countries. Under the first model, company directors are guided by the 'corporate interest', defined as furtherance of the company's prosperity and continuity. The second model illustrates the 'enlightened shareholder value' approach: company directors have a duty to have regard to the 'impact of the company's operations on the community and the environment', although their primary responsibility remains the promotion of the success of the company in order to maximise shareholder value. Under the third model, companies are not just for-profit enterprises, but also social agents delivering goods/services required by 'the community', taking the public good into account in certain circumstances (section 2.3).

The extent to which an MNC, in its global strategies and its actions in developing countries, aims primarily to generate short-term returns for investors, or acts for the greater good in the long term – or something in between – depends on the prevailing corporate model, as interpreted by company directors. That is the normative foundation of the company's existence and operation. As they participate in company business and reflect on new company ventures, directors will metaphorically (or even literally) carry those norms in their briefcases. The example of a *Guide for the Directors of UK listed companies* is cited in section 2.4. The first of the duties listed in the Guide is 'to act in accordance with the *constitution...*'. In this almost 100-page document, the 'impact of the company's operations on the community and the environment' is referred to, but occupies little space compared with other considerations for company directors.

Accordingly, if a company is to pursue actions which 'remedy' the public governance gap in developing countries, including furthering social inclusiveness and long-term environmental sustainability in such countries, its constitution has to permit those actions, plus the directors have to ensure that the company makes efforts to support those actions.

The three cited corporate models are of *commercial* for-profit companies. Not-for-profit companies and charitable or philanthropic foundations - established as special entities attached to the main commercial company or group of companies - are different legal vehicles with different goals, e.g. to make donations. Such special entities do, nevertheless, commonly bear the company's name (e.g. the Shell Foundation, an example of a special legal vehicle, established by the Shell Group in 2000 - referred to in section 4.3) and be closely associated with the company. Founding companies seem to look to associate reputational benefits arising from those non-profit or charitable/philanthropic activities with the group as a whole, including its core business activities, with the aim of boosting the company's overall reputation and brand.

In terms of 'boundary' identification, however, such an approach runs the risk of a not-for-profit or charitable/philanthropic agenda operating side-by-side with a business one, *without* adequate articulation of their respective scope and limits. This creates the potential for mixed messages and blurred roles. Unless the extent of each agenda is clear, company documents/statements may give a false impression of how public-minded the company really is. That will presumably detract from its reputation in the medium term. To avoid such confusion, company roles, including their limits, need to be clearly articulated, avoiding a tendency (visible in some written and spoken interventions by directors) to make – for image

and public relations purposes - extravagant statements or suggestions as to the nature of company activities in line with broad goals of public good.

Within clearly defined roles, company actions need to be appropriately positioned. Environmental offsetting and 'eco-credits' schemes, for example, have the potential to raise private sector finance to fund improved environmental management to positive ends. But, a pitfall to avoid is where a company implements offsetting arrangements unilaterally, without an independent administering authority as impartial arbiter, and the company makes water-resource decisions on behalf of other water users. This risks blurring the boundary between private roles and public responsibilities.

In light of the above, as compared with 'welfare-*maximising*' goals of public authorities, it is better, according to two (at least) of the three example corporate models, to think and plan in terms of private, commercial companies pursuing *focused* actions which *contribute* to public benefit in a defined and circumscribed way, rather than purporting to support actions fulfilling a broad public role.

Re-interpreting statements in the literature on water management produced by international organisations, private–public partnerships in water management can usefully identify and bring out common interests, but without trying to see all water challenges as 'shared risks' which can convert into 'shared actions'.

Identifying what those common interests are, in different contexts – and how far they go – is a challenge that actors in the global debate on water policy are in the process of exploring. For example, a stated aim of the 2030 Water Resources Group Phase is (according to one source), through private–public dialogues and multi-stakeholder platforms, including representatives of civil society, to see how 'new normative approaches' may be devised to expand private sector engagement, so as to draw upon its 'solution-finding strengths'.

This paper shows that, for that to happen, the reality of corporate governance requires that a 'fit' be found between the set of company norms set out in its constitution – the existing normative 'lens' which has to be applied by company directors – and the still to-be-developed normative water-management approaches. The last of the three examples of corporate model in section 2.3 seems to offer more leeway for that, subject to interpretation of that model in different circumstances, and its future evolution.

Overall, as suggested above, as far as the *voluntary* actions of commercial companies are concerned, it is in maximising water-resource *use* efficiencies (companies' own and those of their suppliers) that the private sector can make its greatest and most appropriate contribution. The examples of innovation reviewed here seem to support the working hypothesis of this paper, namely that there are good *business* reasons for private companies in significant water-using sectors to adopt new practices in water *use*. That conclusion is subject to the qualification that business incentives differ according to how far water is (or is not) a 'strategic' business imperative in that sector and for that company.

As for wider water *management*, the material reviewed for this paper suggests that the business incentives for voluntary actions are currently limited to commercial companies protecting their own water supplies, and their own reputations, in line with their business goals, which appears to stop substantially short of ensuring the transition to inclusive and long-term sustainable growth in developing countries envisaged in the ERD. The 'public governance gap' in water management will not be filled by trying to *stretch* companies' activities beyond their own constitutions and the business activities based on them. That would be simply to substitute the public governance gap with a corporate governance gap.

1 Introduction

1.1 Context

This background paper for the 2012 European Report on Development (ERD) focuses on water. Water, like land and energy that together form the part of the 'WEL' nexus presented in the ERD, is subject to competing interests and uses by a broad range of actors, with increasing pressure on those resources in the context of demographic growth and climate change.

According to a survey conducted by the World Economic Forum (WEF) of 580 senior persons in business (including finance/insurance), universities, governments and international organisations, 'water security' is one of the top ten perceived global risks, in terms of likelihood (over the coming 10 years) and impact – alongside climate change and economic crisis (WEF, 2011a).

In global debates on water policy, business is increasingly present.

Twenty-one companies are, for example, listed as participating in the second phase of the 'Water Resources Group', a consortium of businesses, development agencies and an NGO (WWF) which aims to support governments (as the document expresses it) to 'ACT: engage in Analysis, Convene multi-stakeholder collaborations and undertake public-private Transformations in the water space' (WEF, 2011b:.2, 4).

Companies in sectors making significant use of water are informing themselves about the challenges of water management and reviewing their vulnerability to interruptions in water supply in contexts of water 'scarcity'. They are starting to draw up corporate strategies to address 'water risks' arising from their operations. The World Business Council for Sustainable Development (WBCSD) is promoting a 'global water tool' to account for water use and international water specialists are advising on how to measure water impacts and 'footprints', including water 'embedded' in products passed along supply chains.

The signs are that this increased business interest, coupled with evolution in corporate policy, is leading to innovation in practice. This appears to be extending private sector roles in water management and may be shifting the boundaries of its responsibility. If confirmed, this trend could see the private sector becoming an increasingly involved and influential player.

In developing countries the capacities of the public authorities whose responsibility it is to lead water management are often inadequate. Where companies opt to enter into this public 'governance gap', they can - the argument goes - engage constructively and collaboratively, beyond narrow corporate interests, to contribute to improved management of water resources. In the words of the WEF, 'several governments facing severe water challenges have been engaging in more substantive public-private dialogue on water security and water management reform... This is a significant development. We could now be on the cusp of developing *new normative approaches* to water management' (WEF, 2011b: 2, emphasis added).

The recently published *Guide to Responsible Business Engagement with Water Policy* (UN, 2010) sets out a case in support of that argument. The Guide was produced for the CEO Water Mandate under the auspices of the UN Global Compact. The Compact is a voluntary corporate responsibility initiative to promote 'collaborative solutions to the most fundamental challenges facing both business and society', including combining the convening power of the UN with the private sector's 'solution-finding strengths', as well as 'the expertise and capacities of a range of [other] key stakeholders'.

Conditions external to the operations of companies – say the Guide's authors – whether hydrological, ecological, social, institutional or political – create water-related challenges for business which are '*shared risks*' (UN, 2010: 29, emphasis added). An example of such risks is

'weak water management institutions', together with 'out-of-date or poorly enforced public policy' – in a wide range of policy areas beyond just water resources management, including 'land-use planning, agriculture and energy policy'. The shared risks, they argue, require '*shared action*' by business, government and civil society (UN, 2010: 30, emphasis added). They go on to set out, over some 50 pages, an ambitious agenda for business engagement. The authors nevertheless warn that:

> … not all companies have a clear approach to responsible business engagement with water policy and management. And even if a general approach has been defined, translating concepts into practical action can be daunting. Indeed, many companies would benefit from practical guidance on possible entry points for engagement, how to set clear boundaries, and how to avoid pitfalls. (UN, 2010: 14, emphasis added).

1.2 Purpose and scope

This paper reviews the policies and practices of companies in water use and water management, and considers how they manifest an evolution of private sector roles. It does so through examples of innovation by companies in sectors that make significant use of water.

The sectors referred to in this paper are: beverages/drinks, relying on reliable supplies of high-quality water; tourism, which guides visitors to holiday destinations, including water-'scarce' locations in developing countries; and mining and energy, which involve large investments with potentially major impacts on water environments and livelihoods.

Agriculture is considered in two respects only: in the (incipient) efforts of companies to assess embedded water use in supply chains, which (in some of the examples considered) include agricultural products; and through the 'lens' of large-scale land acquisitions - a development in some countries which serves to illustrate, starkly, one possible direction of private sector engagement.

Given that the water requirements of businesses and the impacts of their operations upon water resources vary, the above sectors are *illustrative* of different private sector interests and approaches, and the examples set out in Sections 3 and 4 are *illustrative* of practice in those sectors. It is not the intention here to be comprehensive. Given the broad subject of this enquiry, a more comprehensive survey would require a longer study.

The issue examined here is whether there are good business reasons for private companies in significant water-using sectors to adopt new practices. For the present paper, the working hypothesis has been that business incentives do exist.

A separate background paper to ERD focuses on corporate social responsibility (CSR) – the origins of the concept and its evolution, including the positions of the major stakeholders in the CSR agenda-setting process, as well as impact measurement and monitoring.

The circumstances that induce changes in business practice may depend on a (complex) combination of factors rather than one single driver. To unravel these factors would require a fuller study. In this paper, *reputation* is a particular focus: reputational benefit/damage is taken to come within the frame of business reference where water is significant to that business and strongly associated with public opinion, or closely linked to the concerns of other actors whose trust/respect the business wishes to retain.

In addition to exploring those business reasons for change, this paper considers how far business reasons extend to motivating companies to engage actively with governments and other water users in strengthening water management in developing countries, in response to the perceived or actual public governance gap, i.e. the 'boundary-shifting' issue.

The focus here is large *multinational* companies (MNCs) since they have the scale and resources to make a bigger impact on natural resource management. Smaller entrepreneurs are often involved through the supply chain of those big companies (as discussed in section

3.4). The presence of MNCs in developing countries in the above sectors brings economic activity and jobs, but also creates demands on natural resources, including water. The interest of the ERD is in the role of the private and public sectors in achieving effective resource management for *inclusive* and *sustainable* growth. 'Inclusiveness' means, for example, the availability of jobs for poor sectors of the population, not just the production of wealth for elites. The ERD terms of reference note that threats to the sustainability of water resources posed by climate change in the medium to long term are such that 'business as usual' is likely to involve too high an environmental cost, reducing the future sustainability of growth.

1.3 Methodology

The study on which this paper is based comprised the following three parts:

- A 'scoping' at international level of policies/statements of companies in the above business sectors, and publications of trade associations as well as of global organisations promoting business engagement.
- Key informant interviews with representatives of companies and trade associations to identify private sector actions as pointers of evolving roles/responsibilities.
- A literature review of key written contributions to discussion on the evolution of private sector policy and practice in the example sectors, including how corporate 'water risks' are perceived.

1.4 Voluntary private action – public policy

This paper focuses on what *private* companies are doing - their voluntary actions in water 'use' and 'management', as those terms are defined in section 3.1. These include both unilateral actions, and collaborative actions with government and other stakeholders. By 'voluntary' is meant action that is not imposed by law/regulation, or led by government policy.

A leading example of how public policy has already extended private sector roles in water is in relation to water supply. In many jurisdictions, whether in European Union (EU) countries or in certain developing countries (Herrington, 2003), private, for-profit water companies are required to have regard, in running their operations, to certain social as well as purely commercial objectives, e.g. through social tariffs. This is an example of extension of responsibilities *placed* upon companies, due to the public as well as private good characteristics of water supply. Those social requirements are framed in public policy and enforced by law/regulation. They are an example of how the private sector is not expected, voluntarily, to achieve inclusiveness.

The focus here, however, is on private water users, as opposed to private water service providers, as well as motivations other than compliance with government rules/regulation.

1.5 Water 'scarcities'

By its nature, water is fundamentally a local issue. The circumstances in each catchment vary, in the availability of and conditions of access to water resources, and the configuration of water users/demands. The locally-specific nature of water means it is important to reach beyond visions of scarcity which focus on aggregate numbers and physical quantities, over and above local knowledge and experiences of scarcity (Mehta, 2010).

When considering limits and constraints on water resources, it is useful to think in terms of scarcities (plural) as being experienced in local or district contexts, with disaggregated information on local circumstances (both physical and socioeconomic), as opposed to scarcity as a generalised concept based on aggregate figures on physical water/resource availability at the national, regional, or global level, without taking account of access issues – which include cultural and institutional/political factors (Mehta, 2010; Newborne, 2004).

1.6 Structure of the background paper

Subsequent sections of this paper are organised in the following way.

In **Section 2**, as a first step in this examination of a possible 'boundary-shifting' evolution of private sector roles into areas of activity normally associated with models of public governance, we look at different models of company law and corporate governance, based on examples from three EU countries, and discuss key questions on their implications in practice.

Section 3 sets out examples of companies' efforts to measure and reduce their water *use* in their premises and production processes, and to influence those of their suppliers.

Section 4 assesses in what circumstances companies are going further, by engaging in wider water *management*, in both unilateral and collaborative actions. Examples are cited of innovation in water-risk assessment, sustainability assessment, environmental offsetting, water 'stewardship' and voluntary agreements for mitigation and compensation of project impacts, as well as large-scale land acquisitions.

Section 5 considers the business incentives for companies to adopt new water-use and water-management practices.

Section 6 reviews the evolution in private sector roles in water use, and considers how far new company water-management practices may represent a shifting of boundaries between the private and public sectors.

Section 7 sets out conclusions from this review, including observations for ERD.

2 Company goals and models of corporate governance

2.1 Company constitutions and corporate governance

In this examination of a possible 'boundary-shifting' evolution of private sector roles into areas of activity normally associated with public governance, a first question to consider is: according to corporate models and corporate governance, what is the extent of companies' roles and responsibilities?

The answer depends on where and how the corporate entity in question is constituted and governed – in other words, what it is for, what it sets out to do, and for whom.

Corporate governance is (according to Charkham 2005:1) 'the way companies are directed and controlled, and relate to their sources of finance' including the holders of shares, or units/parts.

2.2 Companies as legal and social constructs

'Companies are not creatures of nature' (Charkham 2005: 3). Companies have, as lawyers say, legal 'personality'. Unlike flesh and blood persons, however, corporate entities come about 'because special laws are introduced' (ibid).

According to company constitutions and codes of corporate governance, how do inclusiveness and sustainability issues come within the frames of business reference?

For companies to contribute to *inclusive* water-resource management entails them taking account of the needs of other water users, i.e. being responsive to the demands of stakeholders beyond their own shareholders, employees and creditors, and their clients/customers and suppliers.

To contribute, however, to strategies for *sustainable* water (and other natural) resource management, companies and other actors also need to take account of the long term. Where company directors and managers are focused on delivering *short-term* returns for investors (prioritising profit levels and shareholders' dividends) they will be less inclined to invest in actions that might reduce costs or increase profitability and status (reputation) in the long term.

2.3 Examples of corporate models

Box 2.1 sets out some brief definitions of company goals and outline notes on corporate models, from three EU countries – France, the UK and Germany.

The three models apply to commercial, for-profit companies, as opposed to other legal vehicles for not-for-profit purposes, e.g. 'associations' in France and charities in the UK (section 2.5 discusses not-for-profit companies and charitable/philanthropic foundations).

The three commercial models illustrate differences in approach, each reflecting national culture and tradition.

According to the French model, company managers are guided by the 'corporate interest', i.e. furtherance of the company's 'prosperity and continuity' in which shareholders, employees, creditors, suppliers and clients/customers have a common interest (the question arises: *what of other stakeholders' interests*?).

Box 2.1 Company goals, 'corporate interest' and directors' duties: three EU examples

(based on extracts from laws and codes, and reports of committees considering law reform)

France (from Charkham with Ploix 2005, translated from the French)
The 'corporate interest' guides corporate management. 'Corporate interest, which cannot be confused with that of shareholders or directors of the company, cannot be reduced to the various interests just analysed. Nor is it simply their sum. Both an economic reality and a social reality, situated at a crossroads, the company is a forum for a multitude of interests. To simply lump these interests together does not enable us to define the interest of the company as a whole', Paris Appeal Court in leading judgment of 22 May 1965.

The corporate interest is distinct from the particular interests of its shareholders, employees, creditors, suppliers and clients, although it reflects their common interest which is to 'ensure the prosperity and continuity of the company'. Extract from the 2002 Bouton report 'For a better governance of quoted companies'.

UK

Section 172 of the 2006 Companies Act on 'The duty to promote the success of the company' (which came into force on 1 October 2007):
(1) A director of a company must act in the way he considers, in good faith, would be most likely to promote the success of the company for the benefit of its members *[i.e. shareholders]* as a whole, and in doing so have regard (amongst other matters) to:
(a) the likely consequences of any decision in the long term,
(b) the interests of the company's employees,
(c) the need to foster the company's business relationships with suppliers, customers and others,
(d) the impact of the company's operations on the community and the environment,
(e) the desirability of the company maintaining a reputation for high standards of business conduct, and
(f) the need to act fairly as between members of the company.
…
(3) The duty imposed by this section has effect subject to any enactment or rule of law requiring directors, in certain circumstances, to consider or act in the interests of creditors of the company.

UK Corporate Governance Code, setting out principles for listed companies:
Every company should be headed by an effective board which is collectively responsible for the long-term success of the company. … The board is responsible for determining the nature and extent of the significant risks it is willing to take in achieving its strategic objectives. The board should maintain sound risk management and internal control systems.

Germany (from Charkham 2005, translated from the German)

The goal of companies is to deliver to the community the goods and services it needs on a continuing basis, as underlined by Art. 14(2) of the Basic Law: 'Property imposes duties [and its] use shall also serve the public good'.

Tasks and responsibilities of the corporate boards and cooperation between them, as per the German Corporate Governance Code, for listed companies (May 2003 version):
'3.1 The Management Board and Supervisory Board cooperate closely to the benefit of the enterprise.
…
4.1.1 The Management Board is responsible for independently managing the enterprise. In doing so, it is obliged to act in the enterprise's best interest and undertakes to increase the sustainable value of the enterprise.
4.1.2 The Management Board develops the enterprise's strategy, coordinates it with the Supervisory Board and ensures its implementation. … 4.1.4 The Management Board ensures appropriate risk management and risk controlling in the enterprise. … 5.1.1 The task of the Supervisory Board is to advise regularly and supervise the Management Board in the management of the enterprise.'

Sources for Box 2.1: Charkham with Ploix (2005); Campbell and Vick (2007); UK Companies Act 2006 and UK Corporate Governance Code (taking effect from June 2010); Freshfields Bruckhaus Deringer (2011).

The extract in Box 2.1 from the UK Companies Act is a concise expression of the 'enlightened shareholder value' approach. This corporate model is based on the assumption that 'a company's relationship with its stakeholders affects the returns to shareholders, and that it is, therefore, in the interests of shareholders that directors take account of broader stakeholder concerns' (Campbell and Vick, 2007: 257).

The question arises how the directors manage the two. Under this model, the *primary* responsibility of company directors remains achievement of the success of the company in order to maximise shareholder value. The obligation to (in the words of paragraph (1) of Section 172) '*have regard to*' other interests/matters affected by the company's activities, including local communities, has, as Charkman notes, a different – lower – level of priority from that of the directors' accountability to shareholders (and to creditors under paragraph (3)) (Charkham 2005; Freshfields Bruckhaus Deringer, 2011:23).

German corporate traditions and practices are different. Companies are seen 'not just as profit-making enterprises, but as social agents that contribute to the greater good' (Gardner, 2010). Under the German model, company goals include delivering goods and services required by 'the community' (the question arises: *which communities, where*?), in line with the duty to take account of the 'public good', in matters of property. Under this model, company goals go further than the other two models (the question arises: *how far, according to German law/practice, do company duties and attentions extend*?).

2.4 Implications in practice

How far company directors and boards decide to go in exploring new modes of water management, including potentially extending the boundaries of company activities into 'public' roles, will ultimately depend on the laws/code applying according to each corporate model and how the directors and boards interpret them.

As to what commercial companies 'have regard to' in their actions, third parties dealing with them will wish to know that the companies can, according to their constitutions, reconcile any narrow, short-term business goals, as for-profit enterprises (and, according, at least, to one model, as social agents), with goals designed to achieve broader and longer-term benefit.

It is useful to visualise the directors at the principal office of a Europe-based multinational contemplating a new water-related venture overseas, in a developing country, which would involve an extension of the company's roles. The directors would reflect among themselves as to the change in roles and the potential shift in responsibilities entailed, including taking advice from corporate legal counsel on the implications. Which matters would weigh more/most in their minds as they decide? How would the new venture fit in the description of the company's business as presented in a future company report? For example, how would the new water-related goals be expressed in key performance indicators (KPIs)?

The focus of Charkham's survey cited in Box 2.1 (Charkham with Ploix, 2005) is on *quoted* companies (listed on stock exchanges). He comments on how, with liberalisation of capital flows and increased opportunities for cross-border investment, interest has grown in comparing modes of corporate governance, and particularly how systems go about offering transparency and integrity of information with which to judge companies' value and the effectiveness of their managers. Charkman notes the change which has occurred, in many countries, in the nature of capital holdings in companies, with more collective savings bodies (for pensions and life insurance) owning share (equity) holdings in companies, as compared with those of single holders or family groups. That brings large investors and their demands for (short-term) returns on investment more into the frame. A key informant, cited in section 5, refers to the role of investors.

The Global Corporate Governance Forum (UN, 2009) argues for common standards: 'a well-governed company takes a *longer-term* view that integrates environmental and social responsibilities in analyzing risks, discovering opportunities and allocating capital in the best

interests of shareowners" (Georg Kell, Executive Director of the UN Global Compact, cited in UN, 2009: 2, emphasis added).

As for stakeholders, according to the OECD Principles of Corporate Governance, 'the corporate governance framework should recognise the rights of stakeholders established by law or through mutual agreements and encourage active co-operation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises' (OECD, 2004).

As for national standards, the *Guide for Directors of UK Listed Companies*, published by a major international law firm (Freshfields Bruckhaus Deringer, 2011), provides a useful example of an existing framework of (commercial) company law and corporate governance. The Guide notes on page one of the introduction: 'Being a director of a UK listed company has become progressively more demanding'. The Guide then sets out, in a document which runs to a total of 100 pages, the duties of directors to their company as well as suggesting 'some practical steps directors can take to protect themselves' (Freshfields Bruckhaus Deringer, 2011). The first of the duties listed is 'to act in accordance with the *constitution...*' of the company (ibid, p.4, emphasis added). The second is the duty to promote the success of the company as referred to in Box 2.1, above. Amongst a wide range of other topics referred to in the Guide, issues relating to 'community' and environment' are raised, although they occupy relatively little space (discussed in four sections, mentioned on nine pages in all).

This is an example of a set of normative standards applying to listed companies in the 'home' jurisdiction of an EU country. As they participate in company business, including reflecting on new company ventures, the company directors will metaphorically (or even literally) carry these norms in their briefcases. The issue of norms and normative standards is further discussed in section 7.2.

2.5 Not-for-profit companies and charitable/philanthropic foundations

Some commercial companies, or groups of companies, create not-for-profit companies or charitable/philanthropic foundations, established as special vehicles attached to the main commercial company or group. As mentioned in section 2.3, these special entities are different legal vehicles with different goals from commercial, for-profit companies. They will enter into not-for-profit arrangements or make charitable/philanthropic donations (gifts) on behalf of the group.

Such not-for-profit or charitable/philanthropic entities will commonly bear the company's name, alongside other words in the title, e.g. 'Foundation' (the example of the Shell Foundation is referred to in section 4.3). The founding company may wish the reputational benefits arising from those not-for-profit or charitable/philanthropic activities to accrue to the group as a whole, in order to boost the company's overall brand. The risk, however, of that kind of broad attribution of reputational benefit is a blurring of the distinctions between different parts of the same group (or grouping of legal entities which are separate, but related to the company name) a possible confusion of roles, at least in the minds of third parties, e.g. a not-for-profit or charitable/philanthropic agenda operating side-by-side with a business one without adequate articulation of the extent of each. That confusion will surely detract from company reputations in the medium term.

The principal purpose of section 2 has been to recall the nature of the goals pursued by the *commercial* arms of MNCs, since that constitutes their mainstream, while the not-for-profit and charitable/philanthropic activities will commonly be (very) small, in resource terms. In the discussion of the private sector's innovation in water use and management in sections 3 and 4, it is assumed, unless otherwise stated, that the companies are acting through their commercial, for-profit arms.

Where companies are, for example, funding environmental offsetting or entering into voluntary agreements to support local water projects with benefits to people living in the vicinity of plants/premises, it may be that that financial support is channelled by those companies or

groups through foundations or not-for-profit companies with their different norms. That reinforces the argument developed in sections 6 and 7 that company roles have to be *appropriate* to company norms.

3 Water use: innovation in private sector practice

This section reviews the role of the private sector in measurement and reduction of water 'use', through example companies in the selected sectors.

3.1 Terminology

The focus here in section 3 is on water *use* by companies *within* their premises and/or production processes.

The water use of suppliers to those companies is also considered, in section 3.4, i.e. the extent to which efforts are being made to reduce the water 'embedded' in the products and services in the supply chain. The more suppliers involved in a company's supply chain, the more jobs and livelihood opportunities, but also the more demand on natural resources, including water.

The term water 'use' is sometimes used as if it were interchangeable with 'consumption' - Box 3.1 sets out the differences. In this paper, the term water use is preferred.

Box 3.1 Water 'use' and water 'consumption'

The terms water 'use' and water 'consumption' are sometimes employed interchangeably, without defining which uses of water are 'consumptive', and in what sense. 'Consumption' ('consumptive use') is a sub-set of 'use' and tends to imply use which is 'one-off' and which excludes other uses. Some uses of water resources do effectively prevent their re-use, for example where a use brings about such a reduction in quality that the water cannot be re-applied for other needs, e.g. where mining activities contaminate with heavy metals, or rivers downstream of cities run black with domestic and industrial waste, beyond the capacity of available wastewater treatment systems. Among water managers, there is a grey area as to which water uses are 'consumptive' and which are not, depending on differing interpretations of the circumstances - in space and time - in which water is withdrawn/diverted and then returned after use.

The term water 'management' is used to describe, in section 4, the steps that companies are taking to engage in water issues *beyond* their own premises and outside their supply chains.

'Water resources management' (plural) is the term commonly employed to refer to the role of public water authorities assigned the task of overseeing use and management of all surface and ground waters.

A key issue for water resources managers is whether or not water uses are compatible. That is to pose the question to what extent, and in which circumstances (according to which spatial or temporal configurations), the activities of storage, abstraction/extraction or diversion of water resources from a given source are reconcilable with another proposed storage, abstraction/extraction or diversion activity. Water resources management includes setting the policy and institutional framework for how rights to abstract/extract or divert water resources are determined and reconciled, or mediated where competing claims cannot be satisfied in full, due to physical resource limits. This is the function of water-resource allocation, which is a key part of the public governance role of water resources managers. Their responsibility is to carry out that role in accordance with the 'public good', in a 'welfare-maximising' manner.

3.2 Improving efficiencies in resource use

Coca-Cola is an example of a company leading innovation in water use in the **drinks/beverages** sector. Operating in more than 200 countries, and through some 300 bottling partners, it has set a target to improve water-use efficiency by 20% by 2012 against a

2004 baseline. Efficiency is defined in terms of a 'water-use ratio', i.e. the volume of water used (within a bottling plant) to make one litre of beverage. The company says that, by 2009, it had achieved seven years of consecutive reduction in the water-use ratio, with a 13% improvement on the 2004 baseline (The Coca-Cola Company, 2011c).

From the international travel companies and organisations reviewed, the picture which emerges is that efforts to evaluate and reduce water use in hotels and other **tourism** outlets are comparatively less advanced, despite the efforts of progressive international tourism companies, supported by industry organisations such as the Travel Foundation and ABTA/The Travel Association. Currently, many hotels do not measure their water use, with their owners/operators largely uninformed of its extent (source: key informant interviews with international travel associations). The ABTA 'Travelife Sustainability System' is described in section 3.4.

As for volumes of water use in tourism, a study of hotels in Namibia recorded, for example, an average of 1331 and 2060 litres per bed night in two luxury hotels (Schachtschneider, 2000). This compares with a 25–50 litres per person per day minimum basic water requirement and the difficulties some communities face, in terms of time and effort, required to obtain water.

The response of the international travel and 'destinations management services' company, Kuoni, is outlined in Box 3.2.

Box 3.2 Kuoni: actions to reduce water use

Kuoni provides 'premium' (high-value) holidays (under its own brand) and mainstream holidays under other brands of businesses it has acquired. The selection of destinations it offers is ultimately customer-driven. Kuoni guides customers to locations it advises are desirable. Tourist visitors are, in effect, temporary paying guests of the host locations.

Water has come to the fore only relatively recently as an issue of interest/concern to Kuoni, although it is looking to be a leader. The company is actively encouraging monitoring of water use in Egypt and Kenya. Kuoni will provide a 50% subsidy for the installation of a water meter to hotels in those countries showing themselves committed to recording baseline information on water use (the company works with about 10 hotels in each country). The two countries were chosen for the Kuoni-led pilot on the basis of a risk assessment, as described in section 4.2.

Source: Kuoni, 2010

Many hotels offer guests the choice of how often their bathroom towels are laundered. As for water-saving and treatment devices by hotels within their premises, technologies are increasingly available, and TUI, another major travel company, has produced a well presented set of guidelines for the installation of water-saving cisterns and other bathrooms fittings, as well as recycling of grey water to irrigate lawns (TUI Travel PLC, 2011).

As for water use in the **energy** sector, a major European power company (which chose here to remain anonymous), with a diverse portfolio of different types of energy generation (e.g. coal, hydropower, nuclear), provides an example. Power companies site their plants near rivers and lakes (or coastal regions) in order to facilitate access to large volumes of water, for e.g. cooling. The company has a project to reduce water use in order to be more efficient, in turn reducing the volumes of water abstracted, although the current level of water charges makes water an ancilliary cost. The siting of power plants in relation to water is, however, a critical strategic issue.

In hydropower, water is used to generate electricity. 'Run-of-river' schemes turbine river flow directly, while dams store water in reservoirs. Hydropower has been identified as a user of water through evaporation, although there is little recent empirical research to provide measurements on the subject (some commentators do not take account of 'net' evaporation and the need to apportion evaporation between multiple reservoir uses).

3.3 Wastewater

Where companies are working on wastewater - the quality of the water returned to the environment after use in their plants to reduce pollution to zero or acceptable levels - this may be voluntary action or an example of compliance with existing laws or government regulations on discharges.

Coca-Cola has a water recycling target 'to return to the environment, at a level that supports aquatic life' (defined according to locally applicable regulations across a number of biochemical indicators), 'the water we use in our manufacturing operations by the end of 2010...'. The company states that 89% of facilities (95% of product volume) were compliant with internal wastewater treatment and discharge standards by the end of 2009.

Energy companies have to be mindful of how they return water to rivers or lakes (often the same stretch of the river or water body) to avoid causing environmental damage (e.g. from thermal pollution).

3.4 Supply chains

Sarni (2011: 244) observes that 'most companies have less understanding of water use … within the supply chain than of direct water use'. This is borne out by the study on which this paper is based.

The focus of Coca-Cola's water-use target (referred to in section 3.2) relates to bottling partners' plants. The company has also commissioned studies to assess water use in the wider supply chain, using the water foot-printing methodology (Hoesktra et al., 2011). It has, for example, studied water used in production of beet sugar supplied to company bottling plants in Europe and for its brand of orange juice sold in North America. These studies showed that the *farm*, not the factory, represented the largest part of the product water footprint (in the case of the orange juice, as much as 99%). The company's efforts to reduce water use in the growing and processing of the products to make its beverages are, it says, to be conducted via trade and other industry associations, rather than by the company engaging with individual farmers, due to the length of the supply chain (source: key informant interview). The company is not (as yet, at least) setting specific targets for its supply chain. Overall, the company seems to be focusing on the more easily influenced, but ultimately less volumetrically significant, issue of efficient water use in its plants.

As for the tourism supply chain, the 'Travelife Sustainability System', established by ABTA/The Travel Association (based in London) operates internationally, including with the support of a number of large travel companies. As well as being 'a practical tool for monitoring and managing social and environmental impacts', Travelife is a certification and awards scheme (source: Travelife website). Hotels and other 'accommodation providers' win 'bronze', 'silver' or 'gold' awards, depending on the extent of the measures they have in place to reduce environmental impact and provide extra benefit for local communities. The awards give visibility and provide 'an additional marketing opportunity' (ibid), i.e. Travelife is a *market premium* scheme.

Water is one of the issues covered within the Travelife assessment and audit process. Hotels have to respond to the questions on water set out in Box 3.3.

Box 3.3. Water-use efficiencies: the scope of actions and audits under the 'Travelife' system

- Is the business actively engaged in achieving a reduction in water consumption (also reduces costs)?
- Are water-saving devices fitted to reduce water consumption? These devices may include any or all of the following: flow restrictors, aerators, percussion (push) taps or limiters on water pipes.
- Are employees regularly reminded to save water?
- Is grey water recycled and treated appropriately before use?
- Are energy saving taps (e.g. mixer or temperature controlled), fitted to ensure water is delivered at the temperature it is required?
- Are low flush WCs fitted or water-saving devices installed in WCs?
- Do irrigation systems for the hotel grounds and gardens use treated wastewater?
- Do irrigation systems for the hotel grounds and gardens have timing devices fitted to minimise operating times, or have a procedure to follow for manual watering?
- Do irrigation systems for the hotel grounds and gardens have moisture sensors fitted to ensure that they water on demand?
- Do irrigation systems for the hotel grounds/gardens work on a system that delivers water from the ground?

Source: www.travelife.org

Kuoni has identified its 300 top suppliers in 15 destinations for Travelife audits. It says it has audited half the suppliers and plans to cover the remaining half by the end of 2011. It is currently working principally with its partner hotels as its 'first-tier' suppliers. Under Kuoni's Supplier Code of Conduct, they are to comply with minimum ecological and social standards. Four focus areas include local sourcing and ethical issues, such as labour conditions and human rights and 'Environment', including an undertaking to 'actively reduce the amount of water [and energy] used'. It is noticeable that the company does not specify quantifiable targets, and that it does not require its partners to do so (Kuoni, 2010: 28).

Kuoni's goal is to move on to the 'second-tier' suppliers and ultimately make the entire supply chain more sustainable, although admitting that this will be a long-term task (Kuoni, 2011). The company says that, in the absence of monitoring on a comprehensive scale, compliance is likely to depend on the goodwill and cooperation of hotel management. The 'boundaries of responsibility' are not yet irrevocably defined, but, with some 15,000 suppliers in all, there are doubts as to feasibility and effectiveness of action by the company alone, beyond *concerted* action of the type led by Travelife.

The questions in Box 3.3 are designed to procure improvements in water use within the hotel/tourist premises, but do not address wider water-management issues 'beyond the hotel fence', as will be discussed in section 4.

4 Water management: innovation in private sector practice

This section considers how companies are engaging in water issues *beyond* their own premises and *outside* their supply chains, whether unilaterally or in collaboration with other actors.

A particular focus of enquiry here is in what circumstances companies are working to understand the context of water resources around a given company or supplier site, and, on that basis, engage with wider water management, and potentially contribute in some manner to water resources management, i.e. the boundary-shifting issue.

4.1 Water risk assessment and water 'stewardship': drinks/beverages

Coca-Cola is making innovations in water management. The company publicly states its commitment to achieve a 'water sustainable' business, employing what it calls 'water stewardship' (this concept is further discusssed in section 4.4).

To this end, it has declared the 'aspirational' goal to 'replenish', i.e. to 'safely return to nature and to communities' an amount of water 'equivalent to what we use in all our beverages and their production by 2020' (The Coca-Cola Company, 2011c, Executive Summary). By 'use', Coca-Cola here appears to mean in-plant production processes, rather than the water used to produce inputs, such as sugar beet, for its supply chain. Based on 2009 data, that amount was 130 billion litres, being the 'total amount of water used in manufacturing our beverages' (309 billion litres) minus 'the volume of treated wastewater (179 billion litres)'. Those figures relate to the company's activities worldwide. Coca-Cola thereby both makes an ambitious undertaking and sets a *quantifiable* limit.

Coca-Cola has developed its own risk-assessment system, with 'Source Vulnerability Assessments' informing 'Source Water Protection Plans', covering water quantity and quality aspects. These assessments and plans are to be established and in implementation, plant by plant, by 2013 across the approximately 900 Coca-Cola bottling plants. The process defined by the company for their development, as well as their scope, is outlined in Box 4.1, based on a recent company report.

Box 4.1 Coca-Cola's water source assessments and protection plans

Since 2004, Coca-Cola has been carrying out water-risk assessments, taking into account 'water supply reliability', 'social and competitive context', and 'supply economics', as well as wastewater standards compliance as a regulatory risk. The assessment methodology now includes a quantitative model using a geographical information system (GIS) and spatial analysis. A further programme of work, initiated in 2008 under the heading of 'Water Resources Sustainability Requirement', means that each bottling plant is to 'evaluate the sustainability of the water resources used to produce their beverages …[and those] required by the surrounding community' - and to be implementing a plan in response to this evaluation by 2013.

To achieve this, Coca-Cola requires all bottling plants to form an interdisciplinary 'water resource management team' including plant manager, plant engineer, water resource experts and business unit representatives (technical and public affairs) who are to complete a 'Source Vulnerability Assessment' of the source of water for the plant and for the local community. The Assessments are to employ technical assessment and modelling, and to include engagement with water-management actors, communities and environmental organisations. Out of the assessments, there will be developed actionable and costed 'Source Water Protection Plans', which are to be updated on a five-yearly basis, or more often as necessary.

Source: The Coca-Cola Company, 2011c: 6

Coca-Cola's stated policy is to study the vulnerability of the water source serving each bottling plant *and* 'local' or 'surrounding' community. The scope of the assessments will depend on how company managers interpret the notion of 'surrounding'. Presumably, where a company plant is drawing water from more than one place, an assessment will need to cover the range of the water sources serving the company and community/ies. Will that extend to all sources in the catchment? The answer seems to be 'No'. **The company's approach, as stated, seems to be focused on the company's plant and a limited number of water users in the vicinity - one particular sub-set of water resources within catchments, rather than catchment-wide. That compares with the mandate of a typical public water resources management authority which applies (at least on paper) to *all* water users within its jurisdiction and allocation of water between them.**

As noted in section 1.1, the extent of performance of those functions in developing countries is variable due to patchy government capacity, a governance gap recognised by Coca-Cola (key informant interview). Coca-Cola's water resource management teams (referred to in Box 4.1) appear to be a response to the lack of government management capacity (or potentially duplicates existing capacity).

From what angle is Coca-Cola assessing water risks? Naturally, when studying the GIS maps and accompanying data, one of the company's key concerns will be the water risks of its plant. That said, the company (as noted above) clearly expresses its intention to take account of the vulnerability of certain other water users in the vicinity of the plant. The question arises how Coca-Cola would handle a situation where the assessment process pointed to competing claims on the water source(s) in question. During a dry season or period of drought, this could give rise to a *trade-off* between the water needs of the plant and those of a nearby community/ies. The company's (narrow) business interest, at plant level, would suggest that it assert and defend its rights to access water at the established rates of abstraction above the competing claims of other water users.

Reputational risk may argue, however, for a different view. Coca-Cola has taken the reputational aspect into account. It views water as a 'strategic business imperative' (source: key informant interview) coming within the company's frame of business reference, because:

- the company is a non-diversified business, producing only beverages (through its own brands and other brands);

- those beverages are manufactured in some 1000 bottling plants worldwide, for local markets;
- the bottling plants serve a range of products bearing the 'Coca-Cola' and other brands;
- the company is dependent on local water resources;
- the 'local' water used by each bottling plant is both a critical resource and one that is strongly associated with the company in public opinion.

Consequently, the company needs - the combined business and reputational logic goes - to demonstrate to the local market that it has concern for local resources (source: key informant interview).

The potential reputational damage arising from possible failure to do so has been forcefully illustrated in the past by negative reaction to the operations of Coca-Cola's subsidiary in India (see Box 4.2). The grievances alleged by local people, which the company disputed, were taken up by the international NGO, ActionAid, and the state authorities and courts became involved in the dispute.

In many parts of India, commentators have acknowledged the lack of effective groundwater regulation. A 'free-for-all' in groundwater extraction was recently highlighted, together with the consequences in falling water tables (*Ecologist*, 2009). Coca-Cola was mentioned as one (among many) major water users in India perceived as (alleged to be) depriving communities of water by drilling deeper and installing powerful pumps to extract ever more water, with no limit.

It is subsequent in time to disputes such as this in India that Coca-Cola undertook its actions to understand water use and water risks. The company representative consulted emphasised, however, that the evolution in company policy and practice came about due to a *combination* of factors, both external and internal. The factors included external pressure from NGOs, government regulation in some jurisdictions, and growing attention paid to water issues within the company. The profile of water risks has increased in the works of both company sustainability specialists and those responsible for other functions. The procurement function within Coca-Cola, for example, requires securing the necessary inputs for the company's beverages production, including over the long term – the key informant cited the example of a 17-year purchase agreement for sour cherries and other fruit, in south-eastern Turkey.

Box 4.2 Water abstraction in India

The bottling plant producing beverages for Coca-Cola located near the community of Plachimada in Kerala state was accused by local people of extracting groundwater to such an extent (1 million litres per day) that local farming activities had to be abandoned because of lack of water. The company disputed this, saying that it was the combination of low rainfall and local agriculture which was causing problems for communities, and that the bottling plant was using a lesser volume of water (a maximum of 600,000 litres per day) from a different (unconnected) aquifer. There was also a dispute about waste from the plant.

Source: Brown, 2003; Coca-Cola key informant.

The company's efforts are presumably designed to avoid, as often and to the extent possible, situations where trade-offs arise, where a dichotomy is revealed between serving a given bottling plant and serving a local community/ies. That seems to have been a spur to reflection and (focused) action by the company on water management.

4.2 Water risk and water management: other sectors

In terms of risk assessments and management in the **tourism** sector, companies are generally at an earlier stage of development than in the drinks/beverages sector.

Kuoni recognises the existence of a public governance gap (source: key informant interview) and chose Egypt and Kenya (as noted in Box 3.2) as pilots for work with hotel partners on the basis of a risk and opportunity assessment. The selection criteria were: the countries' importance as priority destinations for the company with substantial 'passenger volume'; the presence of local CSOs interested in water issues with whom Kuoni had contacts; and the presence of a local management team with appropriate capacity. An additional criterion was the status of the two countries as 'water-stressed'. The method adopted to ascertain water stress was based on the 'Global Water Tool' promoted by the World Business Council for Sustainable Development (WBCSD). Calculations according to this method are based on annual renewable water supply per person, current and projected in 2025. The figures employed (as referred to by the WBCSD) are drawn from the World Resources Institute and include data at individual basin level (although those seem to date back to 1995).

As for current perceptions of 'water risks' in tourism, the first concern is of negative water scenarios *deterring* visitors, rather than (fresh)water being a material factor in *attracting* them. Customers will expect an uninterrupted supply of safe and sufficient water for drinking and washing, as well as swimming and other leisure activities. For hotel owners/operators and international companies who use those hotels, the objective is to avoid events that detract from the holiday experience (e.g. poor drinking water quality causing health problems).

Disruption in supply is a major concern in some travel destinations, following decades of tourism development that have placed pressure on water resources, without an adequate response from the water and planning authorities. One example is Phuket in Thailand, where hotels have been obliged to contract local companies to deliver water by lorry, at substantially increased cost (source: key informant interview).

Travel companies will, wherever feasible, wish to look to public authorities to ensure health and safety, and water quality is no different. Where they cannot do so, hotels generally have storage tanks as a buffer stock, and/or a private supply, e.g. a borehole within the hotel grounds. Further, a water-protection strategy adopted by (large) hotels in coastal locations (e.g. Maldives, Egypt) may, for example, be installation of a desalination plant for private use, an example of unilateral action to make the hotel independent and avoid reliance on external actors (other than for the granting or renewal of any building permit).

The language employed by some tourism companies tends to imply that reduction of water *use* within their premises/sites and those of partners will of itself necessarily lead to 'sustainability'. Voluntary action to reduce water use - adopting conservation measures, to operate with as light an impact/footprint as possible - is a *necessary* step towards more sustainable water management. Without, however, taking account of water resource conditions and limits 'beyond the fence' - the overall stock of water resources, it cannot be known if those measures will be *sufficient* for sustainable water management (Newborne, 2011).

As to how 'water risks' are perceived in the **energy** sector, the current status of the European power company referred to in section 3.2 is characterised in Box 4.3.

Box 4.3 Power stations and water risk: an example

Whereas carbon is a 'high-level' issue which occupies the attention of company directors, water is currently an 'operational' issue handled by power plant managers. The significance of water is, however, increasingly commanding attention within the company.

In contemplating new investment markets, sustainability specialists view potentially volatile licensing regimes as a significant risk and this is also of increasing interest to other company executives. Water access needs to be maintained for the long-term life of plants - usually for several decades. For example, the changes to licensing in England - the development of a market in water rights - are seen as creating an uncertain transition.

As for reputational risk, it is electricity, rather than water, with which its clients and customers most strongly associate the company. On water issues, the relationships the company needs to maintain are primarily with the water authority officials who issue abstraction and discharge licences. The company could, however, attract criticism from NGOs and the public if it were thought to be building power stations in developing countries in order to benefit from less stringent licensing regimes.

Source: key informant interview

As for water risks arising from hydropower projects, the **Hydropower Sustainability Assessment Protocol** (HSAP), published by the International Hydropower Association (IHA) in 2010, provides a tool for assessing project risks, including impacts on water resources, as well as local people (see Box 4.4).

Box 4.4 Hydropower Sustainability Assessment Protocol ('HSAP')

The HSAP is the product of a collaborative process of over two years, namely the *Hydropower Sustainability Assessment Forum* (HSAF), in which representatives of 'developing countries, developed countries, the hydropower sector, the finance sector and NGOs (both environmental and social aspects)' participated (listed on the Acknowledgements page of the document). The HSAF was coordinated by the International Hydropower Association (IHA), which both initiated and led the process.

The HSAP is an assessment tool for screening potential hydropower projects and then assessing the various components of projects at preparation, implementation and operation stages, against a scale of performance levels. The 'sustainability topics' assessed cover a range of social and environmental issues, including specific water aspects (e.g. the 'hydrological resource', 'water quality', 'reservoir management, 'downstream flow regimes'). The HSAP does not seek to specify a standard; each topic is assessed individually to draw up a 'sustainability profile' of the project components, without scoring the project as a whole. The idea is that performance under each component works towards the 'basic good practice' ('Level 3' on a scale of 'Level 1' to '5') as described at each stage, and thereafter up to the higher levels (Levels 4 and 5).

The HSAP was officially launched at the 2011 IHA World Congress on 'Advancing Sustainable Hydropower', held in Iguassu, Brazil, 14–17 June. The terms and conditions for use of the HSAP were confirmed at the Congress and a 'charter' for the governance body of HSAP, the 'Hydropower Sustainability Assessment Council', was also released, including a description of the management structure.

A key function of the HSAP is to clarify industry attitudes to facets of projects (environmental and social) that go beyond technical and economic/financial aspects, and as a platform for dialogue and engagement between different actors involved in hydropower projects. It is on this basis that the HSAP's usefulness in practice, in contributing to improved sustainability of hydropower projects, will be tested, as well as its track record,

over the coming months and years.

Since the launch, eight companies have become IHA 'Sustainability Partners': EDF, E.ON, Itaipu Binacional, Hydro Tasmania, Landsvirkjun, Manitoba Hydro, Sarawak Energy, and Statkraft. These companies are to receive training on the content of the HSAP and its application through two HSAP assessments, one of which will be carried out by an accredited assessor as an official HSAP assessment. The European-based Sustainability Partners are participating in the EU-funded 'Hydro4LIFE' project which aims to promote the adoption of the HSAP over a three-year period (with €1.28 million funding). The objective is that this will consolidate the knowledge base on hydropower sustainability performance within the EU. Meanwhile, the IHA and its partners are in the process of promoting similar initiatives to promote application of the HSAP in other regions, including developing countries.

As yet no official HSAP assessment has been completed - assessment results are expected from 2012 onwards and thereafter such progress towards greater sustainability as is promoted by the HSAP may be evaluated.

Sources: IHA, 2010; http://hydrosustainability.org/; Newborne, 2010

4.3 Environmental off-sets and 'eco-credits'

Market-based instruments for natural resource management include schemes for 'eco credits' and environmental banking, based on 'environmental offsets'.

Environmental offset arrangements are environmentally beneficial activities carried out at one location in order to counterbalance the adverse environmental impacts of a development venture at another (Suvantola, 2005). These arrangements are designed to apply in situations where measures to avoid or mitigate impacts to the proposed development site (e.g. a building or infrastructure project) would nevertheless leave residual environmental damage. Offsetting allows the developer to comply with regulatory requirements by taking the necessary steps to protect and enhance an ecologically equivalent site elsewhere (Australian Government, undated).

Practice in OECD countries is developing, from one-off transactions between single developers and local authorities to schemes designed to fund conservation at a larger scale with environmental banks acting as intermediaries, as brokers of conservation or 'eco-credits'.

In the words of the managing director of the recently established Environment Bank in the UK: 'In times of austerity and a shrinking contribution from the public sector', eco-credit schemes can 'leverage private sector money to fund biodiversity' with economies of scale, through pooling of funding contributions channelled to large 'receptor' sites, rather than multiple, small sites, landscaped 'piecemeal'.

The Shell Foundation - an example of a special legal vehicle of the kind referred to in section 2.5, established by the Shell group in 2000 as 'an independent, UK registered charity, operating with a global mandate' - is supporting launch of this new market mechanism in the UK, under which companies are, for example, purchasing 'conservation credits' which will be used to manage grazing land and sea marshes on the Suffolk and Essex coast in England, as part of flood risk management (Environment Bank, 2011). The intention is to apply the credits to freshwater and brackish/marine environments.

Similar schemes exist in other countries in Europe and their proponents argue that they can make an important contribution to meeting EU biodiversity and habitat-protection targets (Duke, 2010). The global value of biodiversity markets is estimated at US$10 billion per annum (ibid).

Despite the potential advantages of offsetting and eco-credits, questions arise as to their application in practice. These schemes require a level of capacity from the relevant public environmental administering authority that may not be present in developing countries. Further, the schemes make demands in terms of enforcement: the developer providing the offset is required to enter into a binding agreement (Allens Arthur Robinson, 2011) which details the exact nature of the offset and the actions to be undertaken 'to secure enduring protection of the offset site' (Australian Government, undated). A precondition of 'active rehabilitation, restoration and management' will be 'enforceable contracts or performance requirements under development approvals' (ibid). Enforceability of contracts depends on the effectiveness of courts and justice systems, including in terms of speed, cost and accessibility for all potential litigants.

Further, offsetting is not a viable approach in all cases/countries where an environmental asset is of *critical* significance to a given population. In such circumstances, from a public good perspective the trade-off underlying the offset between the environmental resource to be used and the environmental resource to be restored will be unacceptable (Suvantola, 2005). This kind of situation could surely arise in contexts of grave natural resource scarcity.

As for the manner of calculation of offsets employed by Coca-Cola, the company's 'Replenish or offset' goal is, it says, to be achieved 'by participating in locally relevant projects that include watershed protection and conservation, expanding community drinking water and sanitation access and improving water for productive use' (The Coca-Cola Company, 2011c: 2). Two issues in particular arise, as considered in Box 4.5.

Box 4.5 Coca-Cola's offsets calculation

Although 'replenishment' projects are referred to as being 'locally relevant' (The Coca-Cola Company, 2011c: 12), it appears that the offset calculation is made at *global* level, and there is therefore no guarantee that 'water benefits' are necessarily mitigating the company's water impacts in the particular catchments where its operations are located (unlike carbon, where localised mitigation effort has a measurable effect in terms of the global stock/sink of the resource, mitigation of impacts on water resources affects only the specific basin in which it is undertaken.) There is a further potential attribution problem in that the target requires Coca-Cola to 'participate' in projects. The language of the Replenish report is generally careful in this regard, and spells out that the benefits arise from the 'projects' (The Coca-Cola Company, 2011c:12), rather than from Coca-Cola's actions alone (also permitting much emphasis on partnership). That said, the overall target arguably gives the impression that replenished water is closely associated with, or even *directly compensates* for, the company's impact on water, e.g. by expressing the 'water benefit' as a percentage of 'product volume directed by TCCC facilities' (The Coca-Cola Company, 2011c: 12).

4.4 Water 'stewardship' and voluntary certification

The 'Alliance for Water Stewardship' aims to bring business, public-sector agencies, NGOs and other actors together to establish a stewardship programme to create social and environmental benefits, and serve the economic interests of water users (source: key informant interview). The initiative to create and promote the Alliance has been led by The Nature Conservancy (TNC), The Pacific Institute, the World Wide Fund For Nature-WWF, the International Water Management Institute-IWMI, the Water Environment Federation (WEF), the European Water Partnership and Water Witness International in collaboration with the UN CEO Water Mandate and the Carbon Disclosure Project (source: Alliance website: www.allianceforwaterstewardship.org/).

At the heart of this initiative there is to be a standards and certification programme which will seek to 'recognize and reward responsible water managers and users', including businesses, 'by creating opportunities for enhanced community standing and competitive advantage'

(source: Alliance website). The international standard is currently under development. Behind it, will sit an independent verification system.

An international stakeholder committee has been established to develop the standard. This committee will incorporate learning gained from piloting existing regional standards (European and Australian) e.g. a project in Kenya supported by Marks & Spencer (a major UK retailer) and the German development agency, GIZ.

For the water institutes, partnerships and environmental NGOs that are leading this initiative (as 'board' members), the motivation is that the attitudes and behaviour of business in relation to water management will evolve (as well as, no doubt, corporate donations for conservation and environmental management projects). Major international companies are apparently showing interest in the Alliance's aims, although, until the international standard is further developed, it is too early for them to commit (source: key informant interview). The Alliance envisages working with businesses from, for example, the agriculture, drinks/beverages and manufacturing sectors.

The Alliance is based on the premise that the conservation of water catchments is in everybody's long-term interest. Bringing together different actors to participate in the stewardship system does not necessarily require *shared values*, but rather *common interests* (source: key informant interview). To that end, the Alliance is facilitating dialogue between private and public actors in a gradual process.

The Alliance is an example of a partnership between private and public sectors and other actors. It is in the process of development in a collaborative manner, without prejudging the form and content of the international standards of stewardship (source: key informant interview).

Partnerships are a potential means of combining resources (both cash and in-kind), and offering possibilities for risk-sharing, as well as enhancing companies' public credibility - where the partnerships are visible and prove to be productive.

The Alliance leaders will be looking to build on the 'common interests', which the Alliance sees as providing the basis for dialogue, so as to formulate standards which will win broad support.

One key challenge will be to avoid criticisms of the kind recently made of another stewardship certification system, the Forest Stewardship Council (FSC), to the effect that the influence of corporate members has essentially - it is claimed by some commentators - served to dilute the international standards and thereby discredit the FSC label (the label which appears on wood sold in, for example, retail outlets, to assure consumers that it comes from an environmentally and socially sustainable source).

This dispute over the FSC standards relates to *plantations*. There has been a long-standing disagreement among FSC members as to whether plantations (as opposed to 'natural' forests) should be included within FSC criteria as providing timber from environmentally and socially sustainable sources. In its 2008 briefing (WRM, 2008), the NGO, World Rainforest Movement, argued that 'large-scale tree monocultures' should not be awarded the FSC label on the basis that 'whenever they receive certification, this is done through the violation of some or all of [the other] FSC principles' (because they consume water, 'leaving little or no water of people living nearby' and they 'deplete soils, pollute the environment with agro-toxics and eradicate bio-diverse local ecosystems'). The WRM briefing expresses its doubts as to whether the role of the corporate members of FSC is compatible with FSC's mission as an independent, non-governmental, not-for-profit organisation 'established to promote the responsible management of the world's forests'. WRM's concern is that 'many of its members are forestry and forestry-related corporations which are only interested in the certification of their own plantations'.

The FSC case illustrates the challenge facing the Alliance water stewardship programme: what exactly will be defined as 'responsible' water management?

4.5 Voluntary agreements: mitigation of, and compensation for, project impacts

An example of voluntary actions undertaken by individual companies is the agreements entered into with local stakeholders promoted by the mining and metals, and petroleum industries.

Examples of issues that can be addressed in such voluntary agreements, according to the policies of the International Council of Mining and Metals (ICMM) and the International Petroleum Industry Environmental Conservation Association (IPIECA), include 'provisions relating to the local community's use of certain land' (IPIECA, p.60), with, presumably, a concomitant agreement concerning the use of water sources located on that land. Also included in the list proposed by ICMM are 'water and sanitation facilities' together with other infrastructure and services which the mining company may potentially agree to support, alongside improvements to health facilities, schools, roads etc. and offering of employment opportunities.

Voluntary agreements, says ICMM, create useful governance mechanisms, especially where state agencies are weak or absent, e.g. in environmental and social impact assessment. As noted by McBarnet and Kurkchiyan (2007) (writing from a socio-legal perspective), such voluntary agreements constitute special contractual regimes or 'other regulation'. These arrangements mean that private law 'enters into the realm normally attributed to state regulation, in the form of provisions that reach into the realm of public law, deliberately from the outset' (as opposed to incidentally) (McBarnet and Kurkchiyan 2007: 60).

The ICMM proposes that companies approach such agreements through 'good faith negotiations'. The international financing institutions (e.g. the International Finance Corporation) similarly recognise the value of agreements negotiated in good faith and voluntarily entered into by project developers and indigenous peoples and other project-affected populations (PAPs) to mitigate and compensate for project impacts (including water-related impacts).

In other industries (e.g. construction), 'partnering' arrangements emphasise the development of relationships based on cooperation and trust, rather than adversarial relations which quickly give rise to disputes (Jefford, 2005; Begg, undated). Where parties of greatly differing resources and unequal power enter into such arrangements, however, an issue arises as to how their terms are determined and implemented in practice.

For example, the following questions arise as to the scope and effectiveness of such voluntary agreements: who are the parties – with whom is the mining/energy company entering into a contractual relationship? i.e. who exactly are the beneficiaries and how do these private contracts bestow rights and remedies on them, including as *groups*? Conversely, with whom are the beneficiaries entering into an agreement? Is it a local company, created as a subsidiary of the group, or it is the 'parent' company? In either case, what assets does that company hold and what limited liability regime (if any) applies? Is it a commercial company, or a not-for-profit or charitable/philanthropic arm of the corporate group?

These are more than just technical questions. The answers will determine the degree to which, in the event that company undertakings are not being satisfactorily met, the agreements may be relied on by PAPs to ensure delivery of the promised services and/or compensation. Legal means of enforcement may not be accessible (e.g. because of weak justice systems and prohibitive costs of taking cases to court). It may be only the reputational lever that is open to local stakeholders. The partnering concept referred to above seems to constitute a hybrid between for-profit and not-for-profit or charitable/philanthropic models.

The question, fundamentally, is how far private contracts, with 'patchy' effect, can substitute for business-wide standards or state regulation – forms of control which, at least on paper, are more universal in their application (McBarnet and Kurkchiyan, 2007: 91).

4.6 Large-scale land acquisitions

Another form of action by companies has, potentially, significant impacts on water: the acquisition of large areas of land in developing countries.

More than the other types of management approach described above in section 4, these acquisitions appear to be motivated by desire to unilaterally, and in an isolated manner, secure the resource, rather than contemplate access and usage in a collaborative manner.

The investors involved in large-scale land acquisitions are not always private companies, but the existing literature (particularly the information relating to water aspects) points to several agreements made between foreign private corporations (often operating through local subsidiaries) and the state or national governments of developing countries. Such lease contracts are made with sufficiently long durations and transferability as to approximate to contracts of sale (Cotula, 2011).

The question arises how far water is a consideration for the parties involved.

Water is likely to be a factor in such land acquisitions for agriculture, since 'access to land without water is pointless for agricultural investments' (Smaller and Mann, 2009: 3). As to the role water scarcity plays as a motivating factor, or even a general consideration (compared with e.g. soil quality, cost, and transport infrastructure), the literature is unclear. Given political and commercial sensitivities, the information gap on many aspects of large-scale land acquisition is commonly acknowledged, though decreasing (Palmer, 2011). But, whereas the size, location, and even the associated infrastructure of the land can be identified with relative ease, the water implications are harder to trace.

The study conducted by Smaller and Mann (2009) found no publicly available contracts for land deals, a situation found largely to persist in 2011 (Cotula, 2011). Analysis of what *is* available has shown either explicit allocation of water rights, or implicit allocations, presupposed by the crops/locations involved (Smaller and Mann, 2009; Borras Jr., et al., 2011; Woodhouse and Ganho, 2011; Ananthaswamy, 2011).

Much of the commercial and political attention surrounding these acquisitions has focused on sub-Saharan Africa (World Bank, 2010a), and its potential in terms of abundant and 'underdeveloped' land and water resources (World Bank, 2010b: 1). Both investors and the governments that nominally hold the title to the land sold or leased, appear persuaded of the ability of foreign investment to unlock the productive potential of both land and water (Woodhouse and Ganho, 2011).

However, given that the justification is one of moving to more 'modern', 'productive' and 'efficient' forms of agriculture, the question is whether such a transition is possible given natural resource constraints, and if so, whether it can be undertaken without dispossessing local people of their land, water and livelihoods. The water productivity assumed for various agricultural land acquisition projects has been brought into question both in terms of the water requirements of the crops (Schut et al., 2010) and the reliability of water flows within the catchments involved (van der Zaag et al., 2010).

If, as the evidence seems to suggest, water acts as a motivating factor in land-acquisition deals, the overestimation of productivity benefits is a problem, whether or not the parties involved acknowledge it. If water is not a *conscious* consideration, it implies that it is being overlooked or taken for granted. The alternative, that the parties are conscious of the water dimension, suggests that they are being selective, or even disingenuous, in their presentation of the potential productivity benefits. Either way, the risk is that it will only be in hindsight, as the projects evolve and are implemented, that the implications of large-scale land, and water, acquisitions are felt for other users and the environment.

The companies involved in these acquisitions do not appear to produce information on the implications of their policies and actions – a difference from the other sectors considered here. This may be because these transactions are not close to informed consumers, and usually

occur several links down the supply chain from the 'consumer-facing' companies. There is, thus, much less documentation of any activities which acquirers/investors may undertake in negotiating water access and allocations with responsible public institutions, or other users.

Notwithstanding the information gap, it would appear from external studies that the parties on both sides of large-scale agricultural land acquisition deals are not asking appropriate questions, such as:

- How much water is really needed?
- What are the requirements in terms of institutions (including withdrawal rights) and infrastructure?
- How far are there benefits for the local people, and country as a whole, as opposed to other land and water management options?

In summary, there is a risk that the potential of bringing development to 'under-developed' lands and water resources (World Bank, 2010b:1) will be outweighed by the nature of these acquisitions, which put large areas of land, with associated water resources, in the hands of companies acting in a manner that is unilateral and *isolated* from public scrutiny, on water issues - based on a generally low level of transparency around these land transactions.

If companies wish to counter the scepticism of commentators (arising, for example, from the studies cited above), they will need to make available information to show that the terms of leases and contracts provide, for local farmers cultivating neighbouring lands, material benefits arising out of irrigation works associated with the land deals, as well as demonstrate that safeguards have been designed and put into place to ensure that other downstream users will not be adversely affected.

5 Incentives for private sector engagement

This section considers the *business incentives* for companies in the selected significant water-using sectors to adopt new practices, based on the illustrative cases in sections 3 and 4.

Company actions show how the water requirements of businesses vary, as does the extent of association of water with the businesses in the opinions of the public and of other actors. This means that business incentives differ according to how far water is a 'strategic' business imperative (section 4.1).

5.1 Water use - water pricing

In many countries, low levels of charging mean that pricing does *not* provide a strong signal to use water efficiently. This applies in many sectors. Coca-Cola, for example, notes that its water abstraction/access charges are rising (as well as discharge fees), but are still less important in cost terms than, for instance, water treatment (at the intake of plants).

In tourism, water charges typically feature little among other hotel outgoings: pricing does not constitute, in itself, an incentive to action. The effect is likely to be that, for hotel managers, reducing day-to-day water use is less of an immediate (business) interest than managing other recurrent costs (the close monitoring of water use and costs depends on metering, and meters may not be installed). For hotel managers, interruptions in water supply, e.g. utilities shutting off supplies to different parts of urban networks for periods of the day, are likely to be of greater concern.

The expressed intention of companies (e.g. Coca-Cola and Kuoni) to reduce water use in the supply chain via trade associations (referred to in section 3.4) may perhaps be seen as a compromise between business priorities and reputational risk. To be seen to be doing something to tackle water-use issues in the supply chain is important from a reputational perspective (e.g. due to the farm–factory ratio), but the business costs of influencing suppliers directly (e.g. in management time) are likely to be heavy.

5.2 Water management

As for Coca-Cola's motivations regarding water management, the recent company report quotes from its submission to the US Securities and Exchange Committee, arguing that water scarcity and quality issues could 'negatively impact the Coca-Cola system's production costs and capacity'. As well as water being a central product ingredient, strongly associated with the brand in public opinion, the 'unprecedented challenges' underpinning this desire to understand water include 'overexploitation, increasing pollution, poor management and climate change' (US SEC, 2010, cited in The Coca-Cola Company, 2011c: 4). Here, the company seems to be responding to a perceived public water governance gap (see further section 6).

In tourism, the configuration of investments makes the business incentives different. In the destinations chosen as key resorts by major international companies, the number of bed nights reserved for each company will constitute a small proportion of the sum of visitors to that destination. A particular hotel with which each company has a contract will also be one among many others. It is, therefore, through *concerted* action that European travel companies can expect their hotel partners to seek to influence water-management authorities in developing countries, via local tourist boards and hotel and travel associations.

The compelling business risk in tourism seems to be customer reaction to a degrading environment due, for example, to pollution of water bodies. From a customer/client perspective, water use and management are not a motive for choosing a particular destination in booking a holiday. Weather and price are more important considerations, according to a study conducted for Kuoni by the Institute of Tourism at the Lucerne University of Applied

Sciences and Arts (Kuoni, 2011). The study did show that around 22% of customers have an affinity for sustainability, which means that 'sustainable tourism … can be an incentive for a specific customer segment and is thus a market gap'. The tourism industry depends on the existence of agreeable places to visit. The aim of hotels and tourism businesses will be to avoid negative water externalities, such as the effects of weak water management (quantity and quality), detracting from their customers' holiday experience. Meanwhile, a key informant suggested the existence of a reputational *asymmetry* between major international travel companies with well-known brands and a high international profile, and hotel partners who often do not.

In current market conditions, where is the business incentive for travel/tourism companies to innovate? The big European travel companies, i.e. major international names, are witnessing growing competition from companies from Latin America, China and Russia, for instance, as well as competition from new on-line booking enterprises.

In Bali, lack of effective public water management, combined with major tourism developments, is causing water shortages, which are exacerbated by declining water quality (Cole, 2011). The signs are that there is a significant and worsening water-management problem. 'As yet, those that know are not taking any action' (ibid). The reputational risk exists, however. The more local populations suffer water shortages, the greater the risk of unfavourable comparisons with the access enjoyed by nearby hotel guests. Local hotel employees will be able to witness the better conditions enjoyed by the outside visitors.

As for inclusiveness, the tourism debate is still at an early stage. At present, travel companies seem to have advanced further in their thinking on their environmental 'licence to operate' than their social licence. As one key informant commented, tourism can give rise to ethical issues with a strong 'emotional' element, e.g. where golf courses are sited close to poor communities that have problems in gaining access to water. NGOs such as Tourism Concern are working hard to promote debate on such ethical issues, particularly concerns relating to 'water equity' in tourism. This is defined as 'tourism development that does not infringe upon, or take precedence over, the right to water of communities in destinations' (Noble, 2010), i.e. an important element of social inclusiveness.

One business factor – another case of external influences on companies – is the stance taken by international investors. Kuoni, for example, is a quoted company, listed on the Zurich stock exchange, with shares owned by both individuals and collective funds. Its investors ask questions about water issues and this is a further motivation for the company to be ready with answers (key informant interview).

Pending improvements in water resources management to remedy the 'governance gap', the temptation for international tourism companies will be to look to new projects in less developed destinations, i.e. to relocate. This raises the question of whether water resources will prove to be better governed and more accessible in the new location. Experience in other industries (e.g. hydropower) suggests that, in the context of globalised communications, with local civil society groups in contact with international NGOs, for 'bad projects' there are no 'places to hide' (Newborne, 2010).

As for motivations to enter into voluntary agreements (section 4.5) the ICMM and IPIECA offer as the incentive, essentially, the smooth running of projects, and avoidance of 'adversarial' relationships. The ICMM notes that companies failing to do so are 'more likely to encounter delays and difficulties in negotiating and finalizing agreements', for example, becoming 'embroiled in local/regional disputes and conflicts' (ICMM, 2010: 2). 'Getting it wrong' increases transaction costs and creates uncertainty. IPIECA notes that it is 'difficult to operate successfully without community support' (IPIECA, 2011).

The common dilemma that companies face is that, while their business is not water management (cf. water providers, section 1.4), their business operations cannot function without water being adequately managed. Ultimately, *the issue becomes how far they choose to make water part of their business*. The example of Coca-Cola suggests that there are

compelling incentives for drinks/beverages sector to do so, because of the 'strategic business imperative' (section 4.1). For companies in other sectors, such as tourism, that is less evident. The impression is that international travel companies are starting to encounter operational situations of this sort, but are unsure how to handle them (Tapper and Noble, 2011).

6 Extending boundaries of private sector responsibility in water management?

6.1 Evolving role - shifting management boundaries?

The efforts of companies to reduce water *use*, described in section 3, are evidence of an evolving role for the private sector.

A particular focus of this paper is the 'boundary-shifting' issue, as noted in section 1.2, namely how far, in response to the 'public governance gap' in developing countries, companies are engaging with governments and other water users in shaping, and potentially strengthening, water management.

While greater efficiency in the use of water achieved by companies within their own plants/premises and those of their suppliers, may *contribute* to public benefit, that action does not signify an assumption of public responsibility for water resources management, in the meaning of the term employed in this paper, as stated in section 3.1. The pertinent question is how far private sector involvement in the water-management initiatives referred to in section 4 represents a shifting of boundaries between the private and public sector in water resources management, *including the key role of allocation* (section 3.1).

Based on the *illustrative* cases reviewed during this study in section 4, the answer would seem to be clear: companies are in practice *not* looking to assume public roles (despite the impression sometimes conveyed in public statements/documents). They are undertaking collaborative (as well as unilateral) actions with, it seems, the intention to contribute to public benefit in a focused manner. But that does not signify a desire to take on public responsibility in the sense contemplated here (section 3.1); the boundary is not shifting to water resources management for the benefit of multiple water users catchment-wide.

6.2 The 'discretionary water welfare-maximiser'

The operation of environmental offsetting schemes may in some circumstances, however, lead to an assumption of public responsibility.

The act of 'replenishing' (as referred to in section 4.1) meaning 'filling up again' - of putting back what is taken out - begs the question of *how much is taken out in the first place, and when* (at what time of day, week, month, or in what season). Decisions as to who can take out or use what amount and at what time are fundamental to water resources management. That is what the role of supervising, or controlling, water allocation involves (and, in the context of variations in physical water availability accentuated by climate change, water *re*-allocation).

An offsetting arrangement carried out by a company *independently* of supervision/control by a third party is essentially an act of water allocation. It signifies that, in effect, the company reserves the right to decide, in any given situation, whether to defer to the claims of other water users, or to decide in its own interest.

When it does the former, it is recognising of a public good more than the company which unilaterally establishes its private water resource access and systematically uses it in its unilateral and isolated interest (section 4.6). That said, the problem for third parties which encounter companies adopting this *discretionary* public good role is that it may often not be clear which way the company will decide, in which circumstances. Some decisions may be 'inclusive' of other water users and sensitive to sustainability in the long term; other decisions may not. There is a lack of clarity unless the rules for offsetting are clearly laid down and enforced, in an impartial and objective manner by a third party supervisor/controller – in which case the company is not acting independently and unilaterally.

This *discretionary* role of the 'water welfare-maximiser' – or, at least, 'welfare-*increaser*' – is clearly *consistent* with the first two of the three example corporate models illustrated in section 2.3 (Box 2.1). Those two models allow company directors to decide in the narrow, short-term interest of the company. The offsetting may mean that other water users will be left better off, or it may mean they are not. There may be an assumption of a public role for public benefit, or there may not. The discretionary nature of the role may not, however, be consistent with the third corporate model outlined in section 2.3, depending on how that model is interpreted and applied (and its future evolution).

6.3 Future directions

As for direction of future company actions, the *Guide to Responsible Business Engagement with Water Policy* (UN, 2010) argues for constructive engagement to make the best of the 'solution-finding strengths' of the private sector (see section 1.1). Examples of the types of action in which companies may engage, according to the Guide, are reproduced in Box 6.1.

Box 6.1 Types of engagement by companies in 'sustainable water management'

'Companies engaging with governments and other stakeholders to advance sustainable water policies and management take a variety of approaches:

- Encouraging efficient water use across a catchment;
- Contributing to the development of effective and equitable policy and regulations;
- Supporting research, advocacy, and monitoring;
- Aiding environmentally and socially responsible infrastructure development;
- Sharing or gathering data related to water resources;
- Establishing or engaging in participatory platforms and other democratic processes for water governance decision-making or oversight;
- Advancing public awareness of water-resource issues;
- Operating infrastructure (e.g. wastewater treatment) for community and municipal uses;
- Working with communities to improve access to water services;
- Assisting with finance of local water supply and sanitation infrastructure'.

Source: UN (2010: 14)

The authors bring out the *collaborative* nature of the listed actions – the immediate purpose or intended goal is to *support* the management of water resources collectively. The Guide notes that governments will retain their mandate for development of water policy and their leading responsibility for its implementation. The role of business is 'to facilitate and assist government's policy goals', including (as the actions in Box 6.1 indicate) encouraging and cajoling/persuading governments to perform their water resources management functions.

As for *unilateral* action by companies, the authors of the Guide offer a warning (UN 2010: 46):

> While direct engagement with communities can be a very successful engagement strategy, it brings with it many risks particularly with regard to '*responsibility boundaries*'. For instance, governments are widely acknowledged as the entities responsible for protecting and fulfilling the realization of human rights. Companies attempting to fill such roles may be seen as forcing their actions on communities unless engagement is clearly driven by communities or is decided upon through legitimate *multi-stakeholder decision-making processes*. In addition, working effectively with communities to improve water supply and sanitation or other infrastructure is complex and fraught with potentially perverse outcomes and, therefore, requires specialist approaches and knowledge to embed sustainability, ownership, and equity (emphasis added).

This echoes the concern expressed in section 6.2 in relation to, for example, environmental offsetting, where companies implement offsetting unilaterally. The 'multi-stakeholder decision-making processes', referred to in the above quotation might, however, adequately perform the role of impartial supervisor/controller of offsetting decisions.

The World Economic Forum is similarly circumspect with regard to unilateral solutions. While stating that government 'is unable to solve the issue of water security on its own', the WEF emphasises that solutions require 'public-private-civil society coalitions' (WEF, 2011b: 1). The Water Resources Group second phase (an initiative in which the WEF remains involved) envisages what it calls 'public-private transformations in the water space' (WEF, 2011b: 2).

A key point emphasised in the present paper (in sections 2.3 and 2.4) is that when/where directors or managers of commercial companies participate in private-public dialogue, they effectively bring to the table an existing set of company law rules and stock exchange norms. The rules and norms applying to companies based in three example EU countries are noted in section 2. In practice, the rules and norms applying to each company will inform, explicitly or implicitly, the 'transformations in the water space' to which companies will be ready to agree.

Another issue is how such coalitions or dialogues involving the public and private sectors and civil society operate. Will they permit powerful actors (including large companies) to leverage changes in the water resources management regime to their own advantage, and the disadvantage of less visible/powerful users, or will they function through mutual consensus and accountability to mitigate imbalances of power and information (see section 6.4).

As for the 'specialist approaches and knowledge to embed sustainability, ownership, and equity', in 'Responsible Business Engagement' (UN, 2010), it is not clear what measures are being referred to by the authors. The view in the present paper is that the 'perverse outcomes' of which they warn will be best avoided by companies being careful to limit their roles to those that are consistent with company norms.

In section 2.2, it was noted that companies have legal 'personality' with goals framed in their constitutions and interpreted through codes of corporate governance. To the extent that a commercial company's involvement in the kinds of water management actions referred to in section 4 would not represent a coherent expression of corporate personality, consistent with that company's goals, the company will need to clarify its roles and re-think the scope of its actions - or alternatively take necessary steps to modify its constitution and/or adapt its applicable corporate governance model.

As noted in section 2.5, the company or group of companies may decide to create a not-for-profit company or charitable/philanthropic foundation through which to carry out the actions in question. That should help to distinguish different roles – if , that is, the boundaries between the commercial and non-commercial activities of the company/group are clearly stated in company documentation/statements.

6.4 Information

A critical 'building block' of better water management is knowledge of available water resources in each basin/catchment/locality, including understanding of water 'scarcities'. That requires investigation of the limits to the availability of water resources, measuring their finiteness, as well as monitoring water quality, e.g. information on rainfall; monitoring of status of surface waters; understanding of groundwater conditions, including recharge processes and aquifer response to weather variability and climate change. 'In many areas … groundwater investment is *ad hoc* and uninformed because there are no data or maps to guide development' (Calow and MacDonald, 2009). The effect is that extraction of groundwater is, in many locations, a 'silent revolution' (Lopez-Gunn and Llamas, 2008), and an especially weak area of public governance. If the development of groundwater continues to go ahead 'blind', it is impossible to assess the long-term sustainability risk, especially in the context of climate change (Calow and MacDonald, 2009).

The lead for gathering information on water resources availability and allocation should come from government, as part of its water resources management responsibility. But, if the government does not perform this function, is there a role for the private sector? The authors of the Guide note that: 'Businesses face fewer risks when they operate in catchments where the managers have the funding, data and knowledge to respond to the various problems that arise' (UN, 2010: 71).

The examples reviewed in section 4 suggest that companies are engaged in gathering information on water resources for their own purposes rather than for wider public good. Information generates competitive advantage and the private sector is, in principle, not interested in sharing information with other parties, unless there are incentives to do so. The question arises how the private sector can support public water agencies in accumulating data and knowledge, through contributions of financial and technical resources (data sharing is one of the actions listed in Box 6.1). There will be a need for incentives to motivate companies to do that, as discussed in section 7.2.

In this connection, one ambition of the Water Resources Group Phase 2 is to offer a 'diagnostic' to each of the governments it supports, to 'create a comprehensive facts base on the water supply-demand balance the country faces to 2030 and the economics of options available to address any gaps' (WEF, 2011b). Such diagnostics will presumably be funded by donors and/or development banks.

7 Conclusions

7.1 Conclusions

This paper has studied some examples of innovation in private sector policy and practice in water use and management.

The review - based on a documentary study and interviews with key informants - shows that companies in the three selected sectors are making efforts to evaluate water *use* and to be more efficient in water resource *use*, through both unilateral and collaborative actions. Examples of private sector innovation in water use were highlighted in section 3.

Reductions of water use by companies through (unit) resource use efficiencies in their operations can help reduce pressure on water resources and go some way to alleviate water scarcities.

That said, when such situations of scarcity occur, they tend to impose the need for trade-offs between company and community use or environmental requirements. In their public statements, companies seem to play down such trade-offs. Such scarcity situations present, potentially, the most unfavourable comparisons, where reputational damage can become a business risk (brand, trust). As discussed in section 4.1, community vulnerability to disruption in water supply can, potentially, give rise to reputational vulnerability for an MNC with a high-profile brand.

The task of achieving efficiencies in water resource use along companies' *supply* chains is much less advanced, with doubts as to feasibility of action by companies acting alone. This means that collaborative action is also needed, via trade and industry associations. Companies may be torn between a desire to publicly promote their status as market leaders, with significant influence within their sector and extending to their supply chains, and privately admitting the complex challenges posed by 'embedded' water.

Examples of private sector innovation in water *management* were set out in section 4. Companies are starting to assess their vulnerability to water risks and taking some first steps in 'water management' to protect themselves from those risks. Coca-Cola, for example, is a company leading innovation, including working to set quantified targets (open-ended responsibilities are not easily reconcilable with corporate goals).

These company actions in water management - which are voluntary, in the sense of not being imposed by law/regulation or led by government policy - show some awareness of sustainability and inclusiveness issues. Companies are creating relationships with local communities with measures to help secure those communities' water supply, alongside companies' own access. Such voluntary agreements are creating special legal/social regimes applying to defined areas near company plants/premises, forming in effect particular water management zones around industrial/commercial ones. The 'buffer zones' around protected areas (for nature conservation) come to mind, except that the community projects reviewed here seem to be motivated essentially as buffers of company reputations (while nevertheless offering some focused local benefits). On the overall map of water resources, they will be 'islands' of modified water governance, until they are, in some way, extended outwards.

Unless they are, they do not constitute a water resources management regime in any comprehensive sense - they are water projects or programmes, not water regimes applying to all the territory of a basin or country. These projects may *contribute* to reducing water depletion, but they are not a substitute for a basin-wide or nation-wide system. **This reflects the difference between how business executives talk about focused or targeted actions in 'water management', while public policy-makers refer to 'water resources management' (system-wide).**

The companies consulted recognise the existence of a public 'governance gap' in relation to water management in developing countries. From the examples of water management reviewed in section 4, it seems clear that companies do *not* want to assume responsibility for water resources management at system level (including those companies acquiring large areas of land, potentially across whole catchments), but with (according to the available literature on water aspects) unilateral, isolated objectives, as described in section 4.6.

Companies need to be sure of the boundaries of their corporate roles and responsibilities. How far taking on public roles fits with a private company's interests depends on where and how the corporate entity in question is constituted and governed, i.e. what it is for, what it sets out to do, and for whom. If a company is to 'remedy' the public governance gap in developing countries, including furthering social inclusiveness and long-term environmental sustainability in those countries, its corporate constitution has to permit such actions and the directors have to support them. Company roles have to be *appropriate* to its prevailing norms. The last of the three corporate models in Box 2.1 (from EU countries) seems to offer more leeway for that, subject to interpretation of that model in different circumstances, and its future evolution.

Company actions need to be *appropriately* positioned with clear roles. For example, environmental offsetting and 'eco-credit' schemes have potential to raise private sector finance for improved environmental management, to positive ends. A pitfall to avoid, however, is where a company implements offsetting arrangements unilaterally, without an independent administering authority as impartial arbiter, and the company makes water resource decisions on behalf of other water users. In that situation, the boundary between private roles and public responsibilities risks becoming blurred.

As for the working hypothesis (section 1.2) that there are good *business* reasons for private companies in significant water-using sectors to adopt new practices in water use, the examples of innovation reviewed during this study suggest the hypothesis is sound - always subject to the qualification that business incentives differ (section 5) according to how far water is (or is not) a 'strategic' business imperative (section 4.1) in that sector and for that company.

As for wider water *management*, this review suggests that the business incentives for voluntary actions are currently limited to commercial companies protecting their own water supplies, and their own reputations, in line with their business goals, which appears to stop substantially short of ensuring the transition to inclusive and long-term sustainable growth in developing countries envisaged in the ERD.

7.2 Observations

The private sector has a major, critical contribution to make in leading innovation in application of technologies for reducing volumes of water *use*, and for water recycling/re-use – extending and refining existing methods and exploring new 'water-tech' opportunities (as reviewed by Sarni, 2011: 108-116).

Despite the inherent difficulties in evaluating water use through the supply chain, and even more so in influencing that use, corporations at the vanguard (including companies referred to in this paper) may usefully continue to refine water accounting methodologies, as well as work to leverage change through their buying power (by a combination of unilateral and concerted actions).

As for water *management*, the picture which emerges from the examples of private sector practice reviewed here is (as noted in section 7.1) of little interest and appetite on the part of commercial companies for extending their water roles beyond support to focused water projects with communities near business plants/premises to engagement in wider water resources management.

Where public governance for water resources management is currently weak, there is a need for more - or at least, *better* - regulation. The interest of companies is in a 'well-operated system' (UN, 2010: 70) and it is the responsibility of governments to lead in setting legal rules

and regulatory norms defining the system of water resources management, basin- and nationwide, especially the key regulatory function of water resources allocation.

A key challenge remains, therefore, the strengthening of the capacity of public agencies in water resources management. It will be important for private companies to share information and data on water resources with public agencies responsible for water resources management, and potentially other users. For that, there will be a need for specific incentives to motivate companies to generate and share information. Where government budgets cannot carry the cost, international funding support will be required (e.g. from development assistance budgets).

Several key informants, as well as commentators in the literature, emphasise the importance of pushing governments to address the gaps in public water governance through concerted pressure by companies in UN and other (public) international bodies with mandates relating to water management, for example through Rio+20 in 2012.

Meanwhile, actors in the debate on water policy (section 1.1) are looking to explore, through private–public dialogues and multi-stakeholder platforms (section 7.2), whether 'new normative approaches' (as per WEF, 2011b: 2, cited in section 1.1) can be devised which would (somewhat) expand the role of the private sector (WEF, 2010: 6), extending companies' engagement. **How those dialogues and platforms advance, and how far they succeed in generating further innovation, will depend on finding a 'fit' between existing company/corporate norms defined in their constitutions and the new, still to-be-developed norms on water management.** Research could usefully review progress arising out of those dialogues/platforms and assess to what roles companies are ready to commit, as set out in company targets and anchored in KPIs, *consistent with* company constitutions and corporate governance norms.

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