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EDITORIAL

This third edition of the *APCEA Journal* for 2006 includes two reviewed articles and one article reprinted from Globe-Net.

In the first feature article, Ratna Nurhayati, Alistair Brown and Greg Tower provide an empirical study of the relationship between firm specific characteristics and corporate governance characteristics and the extent of natural environment disclosures (NED) practices of Indonesian listed entities. Their findings confirm, amongst other things, that larger entities and those operating in high profile industries disclose more NED than smaller entities in low profile industries.

Janice Loftus and John Purcell, in the second feature article, examine the application of product life cycle analysis in the airline industry, as well as associated difficulties.

An article on Mining and Corporate Responsibility Abroad by Globe-Net is reproduced in this edition.

The Journal also includes its regular feature Environmental Extra!

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Joint Editors 2006

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UNDERSTANDING THE LEVEL OF NATURAL ENVIRONMENT DISCLOSURES BY INDONESIAN LISTED COMPANIES

By Ratna Nurhayati, Dr Alistair Brown, Associate Professor and Professor Greg Tower, School of Accounting, Curtin University of Technology.

Introduction

There has been considerable interest in natural environmental disclosures (NED) across many countries in the business literature (Choi, 1999; Gray *et al.,* 2001; Solomon and Lewis, 2002; Cormier and Magnan, 2003; Lodhia, 2004). This study is important in that it contributes to the developing accounting literature (Barako, *et al.,* 2006; Thompson and Zakaria, 2004; Belal, 2000; and Williams, 1999) by focusing on the NED practices of Indonesian listed entities.

Indonesia faces numerous important environmental problems: (1) mining and industrial pollution affecting all levels of the food chain on oceans and water systems; (2) chronic air pollution, especially in industrial areas and large cities, causing respiratory problems for millions of people; (3) inadequate waste management contributing to poor hygiene conditions and health problems; (4) smoke hazards frequently spreading to neighbouring countries, such as Malaysia and Singapore, that cause acid rain and diplomacy problems; and (5) deforestation, at the rate of 3.4 million hectares per year (WALHI, 2004). These complexities make clear and comprehensive environmental reporting even more important if they are to facilitate critical scrutiny of environmental practices by commercial entities.

On the surface, the Indonesian accounting regulatory structures appears robust and sound (IASB, 2006). However, even though there are standards for regulating 'sensitive' industries such as forestry (Financial Accounting Standards (PSAK) No. 32) and mining (PSAK No. 33), there are no specific requirements to disclose natural environmental information. In fact, no NED requirements are mandated by the Indonesian Capital Market Executive Agency (BAPEPAM) as a prerequisite for entities publicly listing on the Jakarta Stock Exchange (JSX). Consequently, environmental disclosure practices in Indonesia are voluntary. This study seeks to explain the extent of such disclosures.

This study makes important contributions to the research literature. Firstly, it increases the knowledge of NED practices in Indonesia and developing countries in general. Secondly, it views natural environmental disclosure practices from economic, social and political perspectives (Gray *et al.,* 1995a). Such wide-ranging perspectives help in explaining corporate social (and environmental) practices carried out as voluntarily disclosures (Gray *et al.,* 1996). Thirdly, this study incorporates corporate governance characteristics as a basis for assessing the quantitative NED made in annual reports. Studying corporate governance is useful since unique characteristics (e.g. weak disclosure and concentrated ownership) of corporate governance in Indonesia may differ from those of the western world (Rosser, 2003).

Literature Review and Hypotheses

Legitimacy theory focuses on societal recognition of the adequacy of corporate social behaviour (Nasi *et al.,* 1997). It means that society judges entities based on the image they create for themselves. According to legitimacy theory, the only way for entities to survive is "if the society in which they are based perceives the organization to be operating to a value system which is commensurate with the society" (Gray *et al.,* 1996, p. 46). Thus, entities can establish their legitimacy by matching the corporation's performance with public expectations or perceptions (Henderson *et al.,* 2004).

In line with previous studies (see for example Brown *et al.,* 2004; Brown, 2006), it is argued that corporate specific factors help in explaining entities' disclosure practices. Past studies on the corporate governance-disclosure relationship (see for example Haniffa and Cooke, 2002; Eng and Mak, 2003) also suggest that corporate governance characteristics, such as ownership structure and board composition, influence the voluntary disclosures made by entities. These can be framed into six hypotheses (size, economic performance, industry type, managerial ownership, block-holder ownership and board composition). The dependent variable is the extent of natural environmental disclosures (NED). Overall, these six hypotheses are tested as possible predictors for natural environmental disclosures by Indonesian companies.

Research Methods

A sample of 100 publicly listed entities was chosen out the population of 347 companies of the Jakarta Stock Exchange (JSX) for the year ending 2003 (Fact Book, 2004). Stratified random sampling was adopted to achieve sufficient sample size for each group (high and low profile industries) to make a valid statistical comparison between groups (Cooke, 1989).

This study utilizes a disclosure indices technique to measure quantitative NED. The main advantage of utilizing disclosure indices is that the measurement allows the researcher to adjust disclosures that are not responsive to other more direct measures (Marston and Shrives, 1991). This measurement technique is more suitable for developing countries that generally have poor quality and quantity of environmental information disclosed in annual reports. It adopts a checklist to observe disclosure/nondisclosure of environmental information by selecting eight key categories of NED, namely: General Environment Conditions, Environmental Policy, Environmental Audit, Environmental-Product and Process Related, Environmentally Financial Related Data, Sustainability, Environmental Aesthetics, and Environmental Other. This simplified NED index is argued to be more appropriate for an emerging region because of different reporting practices between developed and developing nations (Brown, 2006). In measuring corporations' quantitative NED practices, this study counts up and treats the eight NED elements without differential weights. The unweighted approach arguably is better in that it reduces subjectivity in assigning weights on each NED element. This study utilizes ANOVA and multiple regression to test hypotheses on possible predictors of natural environmental disclosures (NED).

Results

The sample has a range of company sizes, as measured by market capitalization, is wide ranging from less than four billion Rupiahs to over twenty thousand billion Rupiahs, with a mean market value of almost 1,500 billon Rupiahs. Seventeen percent of companies in the sample had a negative return on assets (ROA). The very low mean ROA (2%) shows that many entities have not fully recovered from the tremendous effects of economic crisis that occurred in mid 1997. The striking feature of the sample is a high level of block-holder ownership structure (65%). A similar finding is documented by Kusumo (1998) and the tendency for heavy ownership concentration is widely found in developing world settings (La Porta *et al.,* 1999). Only 17% of the companies have ownership concentration of less than 50%. There were only 30% independent directors in the sample. Moreover, 20% (twenty entities) of the sample have zero independent directors on the board.

Descriptive analysis of the 100 listed entities sampled indicates that only 37 companies disclosed any information about the natural environment in their annual reports. Table 1 shows that the overall sample mean disclosure was 9%; rising to 24% for those companies that had any environmental disclosures.

Environmental Policy and Sustainability was the most disclosed category with 18% of companies providing such narratives in their annual reports. Seventeen percent of entities disclosed Environmental - Other information that covers environmental issues such as environmental protection, environmental education and awards received, and not captured by the other seven categories. The other three categories namely General Environmental Conditions, Environmental Product and Process, Environmentally Financial and Environmental Aesthetics were seldom disclosed with only 5% of the companies revealing such information. None of the sample companies disclosed Environmental Audit information, although this is highly recommended by the Government especially for industries with a high potential to damage the environment.

Table 1: Quantitative Natural Environmental Disclosures by Sample

Sample	Minimum	Maximum	Mean	Standard Deviation
NED practices of all 100 entities	0	0.75	0.09	0.16
NED practices of 37 disclosing entities	0.125	0.75	0.24	0.18

One-Way ANOVA tests (not shown here for brevity) revealed that there was a highly significant difference for the mean of Natural Environmental Disclosures practices between high and low profile industries. Of note is that managerial ownership structure was not a predictor of overall Natural Environmental Disclosure.

Table 2 shows that the multiple regression model is highly significant and has approximately 21% predictive power (Adjusted R-squared). Two firm specific variables, namely size of the company and type of industry, are highly significant at the 1% level of confidence. However, economic performance is not a statistically significant predictor of the NED practices of the sample of listed Indonesian entities. Surprisingly, none of the corporate governance variables help explain the variation of NED practices of publicly listed entities in Indonesia.

Conclusion and Implications

In summary, there is a very low level of NED practice in the sample of listed Indonesian entities and a relatively small number of the entities provided any NED information. This finding indicates that environmental issues are not regarded as a key disclosure.

The two firm specific characteristics (i.e. size of company and type of industry) help explain the level of NED practices. Intriguingly, none of the proposed corporate governance variables (i.e. board composition, managerial and block-holder ownership structures) or economic performance, have predictive power in explaining the variability of NED practices in Indonesia.

Size of company is confirmed as a determinant of NED. One possible reason is larger entities receive greater scrutiny and pressures from the public particularly from independent environmental organizations such as the Indonesian Forum for Environment (WALHI). As the largest environment organization in Indonesia (Aiken, 2004), WALHI openly criticizes the larger companies (e.g. resources and manufacturing) for their operations which potentially, or already, damage the natural environment. In addition, the tendency for

Table 2: Multiple Regression Results for Tests of Hypotheses

Variables	**NED Complete Regression (Sig.)**
Overall Model Significance	0.000*
R-Squared	0.264
Adjusted R-Squared	0.216
Size of Company	0.001*
Economic Performance	0.519
Type of Industry	0.000*
Managerial Ownership Structure	0.712
Block-holder Ownership Structure	0.553
Board Composition	0.839

*Significant at the 1% level

larger entities voluntary to disclose more environmental information could stem from their intrinsic interest in winning over the public's perceptions in order to raise financial capital in the market. The financial market of the JSX is both newly emerging and increasingly globalized. Larger entities, therefore, may disclose more Natural Environmental Disclosures in order to impress both domestic and international stakeholders, particularly potential investors seeking relatively environmentally risk-free investments.

This study found an insignificant relationship between economic performance and the level of Natural Environmental Disclosure practices - a finding which is consistent with a number of past studies NED such as Hackston and Milne (1996), Kusumo (1998), Choi (1999) and Williams (1999). One possible explanation could be that entities, regardless of their profit or loss situation, devote their efforts to generate other information that can be used to justify their current financial circumstances. For example, a considerable number of listed Indonesian entities (over 75%) disclose the effects of economic crisis on their businesses that stop them generating significant profits, growing faster and delivering higher value to shareholders. In other words, it would appear that entities concentrate on explaining their financial results rather than on explaining their environmental records.

Type of industry was also found to be a strong predictor of the level of Natural Environmental Disclosure. Entities in high profile industries disclose more environmental information than entities in lower profile industries. One possible reason is that high profile industry entities (mining and forestry entities) receive greater scrutiny from government regulations and receive greater pressure from the public to fulfil certain environmental expectations. Such pressures, arguably, encourage entities in higher profile industries voluntarily to disclose more environmental information than that provided by entities belonging to lower profile industries in order to minimize such tensions and gain public and government approval for continuing their activities. This is consistent with the tenets of legitimacy theory, which suggest that social, political and economic pressures are brought to bear on key entities.

Past studies have found a significant negative relationship between managerial ownership structure and the level of voluntary disclosure (e.g. Ruland ***et al.,*** 1990; Eng and Mak, 2003). Such a relationship was not confirmed in this study. The lack of predictive power of managerial ownership structure could stem from the inherent managerial ownership structure of Indonesian listed entities which tend to be very small in size (less than 0.3% of ordinary shares are owned by management) and only 33% of the entities that have any such structure.

This study further found an insignificant result for the association between block-holder ownership structure and the level of NED practices. Such a result might signal the insignificant role of block-holder institutions or individual owners in directing and dictating disclose of a greater amount of environmental information to the public. Another possible reason could be that Indonesian owners in general do not consider environmental matters as critical issues that have to be extensively disclosed in corporate annual reports.

Past studies suggest the presence of independent directors on the board of directors encourages the management to provide a larger volume of voluntary information to the stakeholders. However, this study found an insignificant result for the relationship between board composition and the level of Natural Environmental Disclosure. This finding could stem from the traditionally less activist supervisory role of the Indonesian board of directors that is claimed to have less power than in the Anglo-American system (ICMD, 2004).

Overall, based on the sample results, a low level of Natural Environmental Disclosures is reported by listed Indonesian companies. This study finds that legitimacy theory partially explains the variability of NED practices of Indonesian listed entities. The confirmation of size and industry type as determinants adds to body of knowledge of Natural Environmental Disclosures in this developing country.

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PRODUCT LIFE CYCLE ANALYSIS IN THE AIRLINE INDUSTRY

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Introduction

The paper focuses attention on life cycle analysis and how this product-orientated approach reflects an understanding of the embedding of products in a chain of relationships extending both backwards and forwards. Moreover, it illustrates how life cycle techniques might be applied in practice in an airline industry context and, equally significantly, identifies the types of difficulties that might be encountered in identifying and treating relationships.

At the outset it is reasonable to acknowledge the appeal of adopting a product focus as it is potentially the appropriate level of disaggregation at which to assess, measure and manage sustainability impacts. Moreover, it is quite reasonable to suggest that a product perspective is the most valid means by which there can be capture of sustainability orientated competitive advantage. Reporting that focuses on the economic, environmental and social impacts of each product is nonetheless not considered as an alternative to triple bottom line reporting at the entity level. Rather, product reporting can serve as a supplement to entity level reporting. Additionally, it can form the basis for reporting, relevant to different users and product-related decision contexts, such as monitoring of eco-efficiency [1] by management, and also for stakeholders who are users of end products.

What is meant by life cycle and life cycle analysis?

In this discussion the life cycle of a product refers to all steps from the transformation of raw materials, to product use and subsequent waste disposal. [2] The concept of life cycle

[1] For a discussion of eco-efficiency measurement, refer to Schaltegger and Burritt (2000), pp. 238-246 and Schaltegger *et al.* (2003, pp. 62-93).

[2] The meaning of product life cycle should be clearly distinguished from the use of that term to refer to the stages of a product's life over the

assessment[3] has developed since the 1960s and 1970s and is now understood as referring to approaches to product-orientated ecological accounting that incorporate all environmental interventions during the whole life cycle of products, services or infrastructure; while the term, life cycle analysis, is used more broadly to refer to a range of methods incorporating economic, social, political and ecological tasks (Schaltegger and Burritt 2000, p. 243). Within that broad range, Pflieger *et al.* (2005) develop a model capturing sustainability measures, integrating economic, social and environmental aspects of activities, disaggregated at the product level.

Life cycle analysis (LCA) is based on a dichotomy between inventory data, such as emissions, which can be directly measured and thus accumulated, and impact data which are the consequences, such as ozone depletion, of that which is included within the inventory parameter. While environmental inventory parameters can be translated to environmental impacts, "it is currently not possible to quantify the contribution of social inventory parameters such as child labour … in view of social impacts caused" (Pflieger *et al.* 2005, p. 173). Accordingly, the illustration below is confined to inventory parameters. The analysis of performance on inventory parameters and translation to "core indicators" of sustainable development is beyond the scope of this study.

The Global Reporting Initiative (GRI) Sustainability Reporting Guidelines (2002) provide a framework of *core* and *additional* economic, social and environmental performance indicators. A core indicator is one that the GRI considers, based on extensive consultative processes, to be relevant to most entities and useful to most stakeholders. Accordingly, the social and environmental effects reflected in the GRI core social and environmental performance indicators are selected for the purposes of this illustration.

Schaltegger and Burritt (2000, p. 237) identify alternative boundaries of the system considered within a product perspective, ranging from a single production step to LCA, incorporating product transformation outside the boundaries of the company. In their discussion of LCA, Pflieger *et al.* (2005, p. 170) refer to all operations occurring at the production site and "therefore" under the control of the entity as direct activities; and operations occurring beyond the site, as indirect activities.[4] In other words, production steps within the boundary of the entity are direct activities, while upstream and downstream production steps in the supply chain are indirect activities. In essence, Pflieger *et al.* argue that both direct and indirect economic, environmental and social effects are relevant

time from its introduction to the market, its growth, maturity and eventual decline, after which it is replaced by alternative products – a tool commonly applied to the examination of marketing and pricing strategies.

[3] This paper provides a brief introduction to life cycle analysis. For a more detailed discussion refer to Schaltegger and Burritt (2000) and Pflieger *et al.* (2005).

[4] The use of direct and indirect terms differs from their application in management accounting. Thus some activities are considered direct because they are controlled (e.g., power consumed to provide lighting in the factory, and administrative functions supporting the production and sale of the product) but their costs would be treated as an indirect product cost or and indirect cost allocated under activity-based costing.

(at least to some users and decision contexts).

While the more holistic approach of LCA potentially provides more relevant information, the extension of the system considered beyond the boundaries of the control of the entity may detract from the quality of information collected and analysed. The GRI Boundary Protocol recommends the determination of report boundaries based on control, significant influence and significant impact. A three-tiered reporting approach is recommended, reflecting the practical difficulties of accessing information from entities over which the reporting entity does not exercise control.

At a minimum, the scope of operating performance indicators should include entities over which the reporting entity has control. The scope of management performance indicators should include entities over which it has significant influence, while narrative disclosures should capture entities over which the reporting entity does not exercise control or significant influence but which pose key challenges for the entity because of their significant impacts (GRI 2006, p. 10).

While at a conceptual level LCA should proceed with a holistic approach, its practical application in the context of existing information technologies, efficiencies and inter-entity data flows may be constrained to the narrower boundary over which the entity has control. Towards that end, the illustration contained herein focuses on direct activities with some reference to indirect activities to facilitate discussion of reporting issues.

Illustration of LCA in the Airline Industry

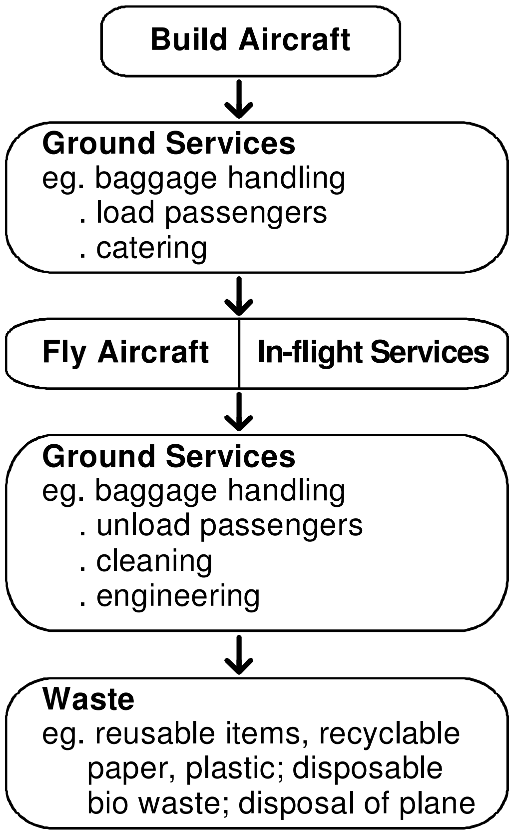
This illustration is not intended to represent any particular airline, nor is it intended to be comprehensive with respect to the operations and significant environmental and social effects of airlines. Rather, it examines the identification of social and environmental effects of selected activities, intra-period and inter-period allocation of effects pertaining to activities that are not feasibly traceable to specific products, and the implications of outsourcing for the monitoring of social and environmental effects.

Flight Services

The airlines' major products are flight services; each scheduled flight may be considered as a separate product. The numerous activities that contribute to the airline's provision of flight services for passengers include: flying the aircraft; in-flight services, which refer to services provided to passengers during the flight; ground services, such as baggage handling, passenger handling, waste disposal and engineering and maintenance; finance; marketing; and human resource management. The classification of the effects of each activity as direct or indirect in the context of LCA is based on the presence of control over the activity by the airline. For example, the operation of the flight is usually controlled by the airline and the economic, social and environmental effects of the flight are classified as direct, while the economic, social and environmental effects of waste disposal undertaken by other entities are classified as indirect.

A selection of direct and indirect activities involved in the delivery of flights is illustrated in Figure 1. The selected activities are readily identifiable with typical organisational structures adopted in the industry. Ground services appear twice in the diagram because they occur both before and after the flight. Pre-flight ground services include loading passengers and baggage onto the flight, safety checks by maintenance and engineering, and the preparation of food and beverages. Post-flight ground services include unloading passengers and baggage, cleaning and maintenance of the aircraft.

Figure 1: Selected activities in the life cycle of flight services



Some of the inputs to in-flight services are outputs of other activities that form part of the product life cycle of the flight service. For example, the outputs of catering activities are inputs to in-flight services. Inputs that represent outputs of another direct activity are not considered so as to avoid double counting.

Environmental effects

The application of LCA involves the collection of information about economic, social and environment effects of all production steps and tracing or allocating the effects to specific products. Table 1 shows examples of environmental effects for ground services, drawing from performance indicators used in the GRI (2002).

Some environmental effects, such as electricity used by the ground power unit for lighting, cleaning, door operations and avionic systems, may be readily traced to each flight service, while other environmental effects, such as the consumption of water at the terminal, are not feasibly traceable to particular flight services. Drinking fountains, bathrooms and lavatories at the terminal are used by passengers and visitors associated with the many flights scheduled to arrive at, or depart from, the airport. In the application of LCA social and environmental effects should be allocated to each product using an appropriate driver in a similar manner as economic overhead costs are allocated to products using an appropriate cost driver. For instance, the consumption of water at the terminal may be allocated to flights on the basis of the number of passenger hours[5] spent at the terminal. Similarly, the environmental effects of inspection,

[5] Passenger hours at the terminal may be a more appropriate allocation base than the number of passengers if there are significant differences in check in requirements prior to departure for flights operated by the airline. This occurs, for instance, if the airline operates both domestic and international flights from the same airports.

maintenance, repair, modification and testing of the components of the aircraft can be allocated to flight services, in a manner similar to the allocation of economic effects, such as the allocation of maintenance costs using techniques applied in activity-based-costing.

Table 1: Selected environmental effects of ground services

Environmental effect (inventory)	**Description**
Materials	
Inputs of food and beverage	Preparation of meals by catering
Inputs of spare parts, grease, oil, fuels, aluminium in sheet, bar and rod forms, composite materials, various plastics, wires, bolts, etc.	Materials used in the maintenance, repair and overhaul of components of the aircraft
Energy	
Electricity consumed	Ground power unit used while aircraft is on the ground for lighting, cleaning, door operations, avionic systems; at the terminal for baggage handling, air conditioning, cleaning, heating, automatic doors, lighting, conveyer belts, escalators, elevators; in catering for food preparation, cooking, refrigeration and freezing; and for lighting and operation used in engineering and maintenance
Water	
Water consumed	Washing the aircraft and other vehicles; used by ground power units and other vehicles; cleaning and cooling processes in engineering; used as drinking water and to flush toilets at the terminals; used to remove ice and snow from the plane, if applicable; and used in food preparation
Emissions, effluents and waste	
Greenhouse gas emissions	Jet engine testing; CO_2 emissions from ground power unit, pneumatic ground cart, emergency diesel generators, baggage handling, push-back tractor and other vehicles
Discharge to water	Washing parts, aircraft and other vehicles; hand washing, laundry (uniforms/overalls)
Biodiversity	
Impermeable surface % of entity’s land	Concrete area at engineering workshops, terminals and related sites

The allocation of social and environmental effects of engineering and maintenance activities in the application of LCA poses additional complexities where operations performed in one period, such as the overhaul of an engine, pertain to the production of flight services over multiple periods. When accumulating social and environmental effects of engineering and maintenance activities it is often necessary to consider a longer horizon than one year.[6]

For example, the overhaul of an aircraft engine is scheduled after each cycle of a specified number of engine hours [7], irrespective of whether the engine hours are spent on the ground or in flight. The social and environmental effects of the labour, materials, energy and waste associated with the overhaul can then be allocated to flight services based on the actual or expected number of engine hours consumed by each flight service.

Social effects

Table 2 lists selected social effects of ground services including engineering and maintenance.

Some social effects, such as certain labour practices, may be more readily traceable to specific flight services than others. For example, hours lost due to injuries resulting from a baggage handling accident may be easily associated with a flight service, while hours lost due to repetitive strain injury are unlikely to be specific to an individual flight service, and thus need to be allocated on a reasonable basis. In applying LCA the social effects of activities with a high labour component can be allocated based on a measure of labour hours used in the production of each product or service.

In measuring the social effects of human rights policies on the freedom of association, it is necessary to determine weighting applicable to different labour input, to the extent that labour resources used in the production of the flight service are not covered by the same policies. For example, due to differences in labour laws between countries, ground crew employed offshore, either directly by the airline or as part of an indirect activity performed at the destination airport, might not have the freedom of association enjoyed by domestic ground crew. Thus in measuring the social effect for the freedom of association parameter for the flight service it is necessary to identify the portion of labour contributed by workers who have freedom of association. This could be achieved by measuring the actual or expected labour hours of the relevant categories of workers per flight service.

Quantitative social indicators, such as the amount of staff training, present additional complexities when measuring effects at the product level. In allocating the staff training of ground crew to a flight service it is necessary to consider the amount of training undertaken by ground crew within a specified period of time. This will vary between staff and employment category, with more training time experienced by employees engaged in apprenticeships. The accumulated training time may then be allocated to flight services, based on a measure of actual or expected labour hours (or minutes). For example, if baggage handlers undertook 8,000 hours of training during the year, and performed 320,000

[6] This is not to suggest that inter-period allocation of environmental and social effects of activities in the application of LCA is confined to engineering and maintenance activities.

[7] Additional engine overhauls may be scheduled on inspection after incidents such as bird strikes or the use of power in excess of the normal maximum under emergency conditions, causing potential reduction in the expected life of the engine.

hours of service, 0.025 [8] hours of staff training would be allocated to a flight service for every man-hour of baggage handling. This process could then be repeated for other categories of employment.

The effects of outsourcing on reporting and monitoring social and environmental effects can be considered in the context of catering services. The airline may choose to outsource some or all of its catering services. The social and environmental effects of catering services may be included in the entity-focused sustainability report of an airline to the extent that the activity is controlled by the reporting entity, as recommended in the GRI Boundary Protocol. The proposed *G3* suggests that if the activity is neither controlled nor significantly influenced, but the social and environmental impacts are significant, narrative disclosure should be included. Thus, in applying the proposed *G3* to reporting on the social and environmental effects of an airline's catering services, social and environmental performance indicators would be provided to the extent that the catering services are controlled while reporting would be confined to narrative disclosure for outsourced catering services. In contrast, LCA conceptually makes no distinction between controlled and outsourced activities other than to classify them as direct or indirect components of the product's life. However, in practical terms there may be some limitations on access to information about the social and environmental effects of activities beyond the control of the reporting entity.

Concluding comments

Parallel to the development of economic measures at the product level, such as activity-based costing, is the burgeoning product-focused approach to sustainability reporting. This approach, combined with life cycle analysis, incorporates the economic, social and environmental impacts of the direct and indirect activities that collectively contribute to products delivered to end consumers. The information thus produced, enables product-related decision making by management and stakeholders to reflect sustainability considerations. Ultimately, sustainability information at the product level provides capacity for sustainable operations to be driven by market transactions. Information about social and environmental effects at the product level is also useful for management decisions about the continuation or existing product lines, new product developments or investments. This is achieved by facilitating assessment of the potential impact of product-related decisions on the entity's objectives of satisfying stakeholders' expectations of social and environmental performance.

A difficulty that may be encountered in the practical application of life cycle analysis with respect to indirect activities is limited access to the information comprising the inventory parameters of social and environmental effects. The ability of the entity and other stakeholders, such as consumers, to analyse the sustainability dimension at the product level is subject to the level of transparency of social and environmental effects throughout the supply chain. Similarly, difficulties may arise in the management of social and environmental effects where an activity is predominantly beyond the control of the entity. While the entity, in applying its own sustainability principles, may prefer, for example, a high level of recycling, the decisions made by downstream operators may reflect a greater weighting on economic considerations.

[8] 8,000 hours of training/320,000 hours of service

Table 2: Selected social effects of ground services

Social effect (inventory)	Description
Labour practices and decent work	
Injuries, days lost	Injuries and days lost for ground crew including engineering and maintenance staff from incidents traced or allocated to the flight service
Staff training in hours	Apprenticeship programmes in engineering and maintenance, staff training programmes
Human rights	
Policies against discrimination: policy to cater for disabilities, religious beliefs and dietary requirements	Policies to cater for disabled access around the terminal, and religious requirements, such as prayer rooms, EEO policies and procedures
Policies for freedom of association	Policies applicable to ground crew including maintenance and engineering departments
Society	
Noise problems	Noise generated in testing jet engines
Product responsibility	
Policy for preserving customer health and safety	Safety procedures for passenger handling; procedures and regulations for safety and monitoring systems (e.g., certified staff on certain tasks, formal and regulated training), aircraft engineers' log books

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MINING AND CORPORATE RESPONSIBILITY ABROAD

Reproduced with acknowledgement to GLOBE-Net, 30 August 2006

In an apparent world first, the federal government in Canada has launched a series of roundtables across the country to explore ways to improve the social and environmental performance of Canadian mining and extractive firms operating abroad. Sparked by particular concerns on the conduct of some mining firms operating in developing countries, the sessions will provide stakeholder input for a report to Parliament, and an opportunity for Canada to take the lead internationally.

In June 2005, the Parliamentary Standing Committee on Foreign Affairs and International Trade (SCFAIT) tabled a report, "Mining in Developing Countries and Corporate Social Responsibility". The Committee requested the government move towards a regulatory approach for Canadian firms operating abroad, saying that "more must be done to ensure that Canadian companies have the necessary knowledge, support and incentives to conduct their activities in a socially and environmentally responsible manner and in conformity with international human rights standards."

The Committee tabled the report following several years of hearings related to the activities of Canadian mining companies in various countries, including Colombia, Sudan, the Democratic Republic of Congo, and the Philippines. Based on presentations of the environmental and social concerns surrounding these operations, the report recommended the federal government conduct specific investigations into certain projects and consider regulatory measures to remedy the problem.

The government did not enact legislation, but is now supporting the roundtables and has formed a special Advisory Group consisting of members of industry, aboriginal groups, non-governmental organizations and corporate responsibility experts.

The first roundtable took place in Vancouver this June, guided by a Discussion Paper that outlined relevant issues to start the debate. Participants heard presentations from concerned organizations and citizens, and a review of corporate responsibility practices in the Canadian mining sector; the process also includes oil and gas firms.

Three more meetings are scheduled this autumn, the first in Toronto in September, followed by sessions in Calgary and Montreal. After these sessions, a report will be presented to Parliament detailing recommendations for the government, the private sector, non-governmental organizations and industry associations to strengthen the social and environmental practices of Canadian extractive companies abroad.

According to Catherine Coumans, Research Co-ordinator for industry monitor MiningWatch Canada and member of the Advisory Group, the Vancouver session highlighted some organizational issues, but all stakeholders have committed to working together to tackle the problems.

Says Coumans, “Industry is taking the process very seriously, and participating vigorously. They generally take a constructive, pragmatic approach.”

Discussing the issues with industry has come easily, she says, because companies understand the issues well, having experienced many of them first-hand. Companies are eager to tackle the challenges they face in their business, in order to reduce risk and improve operating practices.

“The industry is very clearly acknowledging that there are issues that need to be addressed,” she adds.

The Department of Foreign Affairs has also been an important catalyst for the process, notes Coumans.

Fellow Advisory Group member Gordon Peeling, President and CEO of the industry group The Mining Association of Canada, agrees that industry is open-minded about the process, despite some initial wariness that the public sessions would consist of mainly ‘industry-bashing'.

Canada's mining sector abroad

Canada has been a mining country from the start, and has become one of the world's most leading promoters, users and exporters of mineral resources. Canada is also a leading supplier of capital for the international mining industry; the majority of Canadian mining investment is in overseas projects, and Canadian firms are active in many developing countries around the world.

In most situations, there is opportunity for the developing nation and its local communities to benefit from such investment. Building infrastructure and providing jobs, training and steady income for local workers can raise living standards and allow communities to take more control of their economic and social destinies.

However, there is equal risk for mining activities to be disruptive to indigenous ways of life and damaging to the environment. The key is for both the company and the community to find a balance that allows suitable mining projects to continue in a manner that provides benefits to all while minimizing the associated risks.

But mining as an industry inevitably has huge environmental and social impacts, and some Canadian firms are among the group of companies that are facing difficulties around the world. In Canada, well-developed regulations and enforcement mechanisms exist to ensure that extractive and mining companies carry out their activities in a sustainable manner. Many companies have strong corporate responsibility policies in place that constantly evaluate progress.

But internationally, Canadian firms have been involved in a number of disputes over the social and environmental effects of their operations.

Many of these firms are headquartered in Canada, while others are incorporated in Canada and located in other countries. Often, companies receive support from the Canadian government in the form of trade facilitation, financing and risk insurance.

In some cases, the firms are operating within the legal requirements of their host countries, but well below the standards developed and utilized in Canada. Other times, the firms employ sound environmental management techniques, but face difficulty in addressing the concerns of the communities in which they operate.

There have also been examples where companies have failed to receive government approval and have been forced to abandon projects after the host country determines that the environmental and social risks outweigh the potential economic benefits.

Canadian firm Manhattan Minerals tried in 2002 to develop an open-pit gold mine in the village of Tambogrande, Peru. By 2003, local opposition had risen, and the Peruvian government denied the company a permit. The project collapsed, and the company, which had already invested more than $58 million, suffered a precipitous drop in its share price and was eventually disbanded.

Another example of a project plagued by conflict is Inco's Goro nickel mine in the South-western Pacific island territory of New Caledonia.

New Caledonia is estimated to possess around 25 percent of the world's nickel reserves, and also boasts rich biodiversity, including one of the world's largest double-barrier reefs. The Goro project has been under development for years, and the indigenous Kanak population, who rule parts of the island, have made significant protests over the mine's potential environmental impact.

The mine is currently under construction, but has faced blockades and several closures. A court case challenging the environmental impact statement prepared by the company led to a revocation of the mining permit, and legal action is now pending to have construction halted while the situation is addressed.

During recent takeover bids for Inco, the Goro project was cited as politically and financially risky, potentially lowering shareholder value.

The Goro case provides an excellent point for comparison with another Canadian-led nickel mine planned for New Caledonia. Falconbridge's Koniambo mine is in the development stages, but the approach has been different right from the start, says Catherine Coumans from MiningWatch Canada.

The company has been working with the indigenous Kanaks for some time, and has undertaken extensive environmental studies and impact assessments, learning what it can about the issues that are locally relevant. For example, a baseline study on local species was undertaken, a step which Inco skipped but is now being forced to complete.

The company also consulted the local communities to determine where it should locate its port in order to minimize damage to fisheries and food supplies. In terms of overall environmental impact, including waste management and construction, the Falconbridge plan represents a significant improvement, says Coumans.

Both projects would have enormous impacts on the environment, she notes, but the engagement that Falconbridge has undertaken has made its project much less controversial and subject to less complications.

While visiting the Falconbridge site, employees said that the extra investment to perform environmental studies and work with the community will more than pay off if the project is allowed to proceed, adds Coumans.

One of the most high profile Canadian mining projects is Barrick Gold's Pascua-Lama project, where the company hopes to extract some $11.5 billion worth of gold from the Andes Mountains on the border of Chile and Argentina. The Chilean government has given tentative approval to the project, but local opposition is rising over fears the mine will damage fresh water from a glacier that supplies 70,000 people in the valley below.

The company has put in place an extensive environmental management plan to ensure that the water supplies to the valley below would not be affected. The company is obligated to monitor and maintain water quality at points below the mine. Barrick notes that members of a local Water Users Cooperative, representing “2,000 water users in the area”, voted 94 percent in favour of the project.

The project has undergone the most extensive environmental review in Chilean history, and the company has incorporated suggestions from stakeholder input through public consultations. To ensure zero discharge of contaminants to local water supplies, the company has designed a multiple-barrier system with a number of ‘fail-safe' components.

Pascua-Lama project manager Ron Kettles notes, "this is far and away the safest and most environmentally sensitive project that I've ever built in 40 years in this business,” reports The Independent.

Yet environmental groups, municipal officials, and farmers insist that the project will be damaging to the local environment and will hurt their livelihood, sacrificing the region in exchange for a mere twenty years of economic benefits while the mine operates.

The Barrick case is a complicated one that illustrates the challenges that Canadian companies can face when operating abroad. However, with environmental systems in place, the federal government and certain local groups appear to be on board with Pascua-Lama, though hurdles still remain.

The challenges a company will face are unique for each operation, says Gordon Peeling, but there is a pretty consistent ‘set' of issues that firms must deal with when operating abroad. Larger firms often have more capacity and experience to address problems before or as they arise, but junior firms are sometimes faced with entirely new situations, he adds.

Opportunities for change

Most Canadian mining companies have made voluntary commitments to corporate responsibility, and many firms have well established social and environmental policies.

The Mining Association of Canada, representing the minerals industry, has been acknowledged as a leader in sustainable development for extractive companies. Towards Sustainable Mining is an industry-led initiative that seeks to improve environmental and social performance in a number of areas that were identified by stakeholders as needing improvement.

Member companies now engage in performance reporting and benchmarking in a number of different categories, including: energy efficiency, greenhouse gas emissions, tailings management, external outreach and crisis control. A Community of Interest Advisory Panel, made up of representatives from labour, Aboriginal groups, NGOs, mining communities and the investment sector, meets regularly to foster dialogue and provide feedback.

Though the Towards Sustainable Mining program is only in its second year, it represents a voluntary commitment from the industry to work with all stakeholders and reduce negative social and environmental impacts of mining operations. Backed by a strong domestic regulatory regime, this initiative is helping to change the perception and reality of mining in Canada.

Currently, the Canadian government supports voluntary commitments to corporate responsibility for companies working abroad through several avenues. The federal government has a stated commitment to social and environmental standards, and encourages companies to adhere to the OECD Guidelines for Multinational Enterprises, a set of principles developed by governments to promote good business conduct. Canada also endorses the UN Global Compact, another voluntary initiative led by UN Secretary General Kofi Annan.

Other standards include those issued by the International Finance Corporation, and the Equator Principles, which have been signed by 40 major financial institutions worldwide. Gordon Peeling notes that it is difficult for any firm to secure capital for a significant overseas project without demonstrating commitments to social and environmental management.

Through the Canadian Trade Commissioner Service, the government also provides assistance to companies to meet social and environmental standards and has pledged to strengthen governance in this area.

So far, however, there are no legally binding obligations for Canadian companies to respect human rights, indigenous peoples' rights, or environmental standards abroad. It is up to the companies themselves to ensure their operations are environmentally and socially sound, and many are doing so, encouraged by domestic polices as well as the potential for improving community relations abroad.

The result of the roundtables may address this issue by endorsing a regulatory approach, or may seek to strengthen capacity for a continued voluntary approach. According to Catherine Coumans, the industry has indicated that it does not specifically oppose increased regulations, but is mainly concerned over maintaining a "level playing field" for Canadian firms to compete with other international interests.

Gordon Peeling from the Mining Association believes that the industry will be unlikely to endorse a regulatory approach that involved extra-territorial application of Canadian law, but notes that there are a variety of options that can be explored to achieve positive results. These could include requirements for financing, reporting standards for publicly listed companies, or the creation of an 'ombudsman' that would have some authority with which to influence firms. Increasing the power and resources of initiatives such as the OECD guidelines and filling in some areas could also be an option, he notes.

Peeling says that the process is still very much in the preliminary stages, as the government is mostly in a listening mode at the moment. "There is plenty of potential for some very good ideas to be implemented here. Whether there is a 'perfect fit' remains to be seen," he notes.

A successful program could reduce international pressure on Canadian firms and provide a strategic advantage for the industry, he adds, cautioning that although this could be a huge 'win' for Canada, it could also hurt the investment climate if not designed properly.

In order to implement any kind of legislative approach or voluntary commitments, there are issues that need to be resolved, such as installing appropriate mechanisms for monitoring, verification, dispute resolution and sanctions. Without such a regime, new rules would have little meaning. As Peeling notes, the whole process is still in the preliminary stages, and the feasibility and merits of each idea have yet to be fully explored.

Just having the Roundtables is a big step forward, says Coumans, noting that it appears to be a world first. Some have called for Canada to use this process to start an international dialogue on the issue, engaging other mining countries such as the United States, United Kingdom and Australia. If the federal government can seize the opportunity to do so, Canada could strengthen the international market for our mining companies while protecting the global environment.

"As a perceived global environmental steward and leading mining nation, Canada should place great importance on the activities of our natural resource companies that operate abroad," notes Dr. John D. Wiebe, President and CEO of the GLOBE Foundation of Canada. "Ensuring that environmental and social management is of the highest standard can only help to maximize future business opportunities, improve conditions in the host country, and safeguard Canada's international reputation with respect to corporate responsibility," he added.

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ENVIRONMENT EXTRA !

AUSTRALIAN GOVERNMENT. RETHINKING REGULATION: AUSTRALIAN GOVERNMENT'S FINAL RESPONSE (AUGUST 2006)

There follows some selected recommendations and the Government's responses.

Recommendation 4.70: Implement selected recommendations from the 2005 review of the National Pollutant Inventory:

> **'reporting for greenhouse gases should remain outside the National Pollutant Inventory framework'.**

Response:

At its 14 July 2006 meeting, the Council of Australian Governments agreed that the NPI would not be used as a vehicle for reporting greenhouse gas emissions, pending finalisation of a report by Senior Officials to COAG (Coalition of Australian Governments) in December 2006 on a proposal for streamlining emissions and energy reporting. The Australian Government supports the development of a single streamlined system for greenhouse and energy reporting and disclosure, based on national purpose-built legislation that imposes the least cost and red tape burden, as agreed by COAG.

Recommendation 4.72: Undertake further analysis of the merits of the Product

Stewardship National Environment Protection Measure

‘The Australian Government should undertake further analysis to assess the merits of the Product Stewardship National Environment Protection Measure proposal. This analysis should consider the findings of the Productivity Commission Review of Waste Generation and Resource Efficiency, particularly in relation to the potential merits of a self-regulatory regime compared to any feasible alternatives.’

Response

The Australian Government agrees to the recommendation. These issues are being dealt with by the peak body of Australian, state and territory environment ministers – the Environment Protection and Heritage Council. With key industry sectors, the Council is developing a collaborative approach to product stewardship which can include co-regulation in the form of a National Environment Protection Measure (NEPM). Where a majority of industry favours a national voluntary take back and recycling scheme, a NEPM can provide support by regulating companies that opt not to participate in the scheme.

The potential impacts of this approach for specific sectors will be analysed during the second half of 2006, taking into account the findings of the Productivity Commission Inquiry into Waste Generation and Resource Efficiency. Following this the Council will invite public comment on a draft NEPM and accompanying analysis.

Source: http://www.pm.gov.au/news/media_releases/media_Release1869.html#response

BOOK REVIEW - INTERNATIONAL DOCUMENTS ON CORPORATE RESPONSIBILITY – A COMPREHENSIVE COMPENDIUM OF IMPORTANT CODES ON CORPORATE SOCIAL RESPONSIBILITY.

Seeing the book *International Documents on Corporate Responsibility* (Edward Elgar 2006) - more than two inches thick with norms and codes on corporate social and environmental practice - prompts opposing reactions. First, in the electronic age, the question arises: why use up paper and glue to create a book of resources that are almost all readily available on the Internet instead of just creating a website with links? Picking up the book and flipping through its pages, however, generates a tangible appreciation for the sheer volume of conventions devoted to corporate social responsibility (CSR) in a way that the web cannot.

"Effort is necessary for the assembly and not the translation," states Stephen Tully, the law professor at the London School of Economics who edited the edition, in the preface.

Thankfully Prof. Tully abides by this statement, limiting his preface to a relatively short treatise explaining the context of global corporate social responsibility (CSR) codes (for those who can understand his dense academic legalese.) One of the more interesting concepts to arise out of the preface is the notion of "code fatigue," which is readily apparent from the hundreds of instruments, standards, and laws in the book that companies must attend to.

"This text could constitute a starting point towards the eventual codification of international norms within a convention on corporate accountability, possibly emanating from the Organisation for Economic Cooperation and Development," Prof. Tully states.

Interestingly, Friends of the Earth has already proposed just such a consolidation. The very first section of the book, which starts with the UN Global Compact, includes FoE's "Proposed International Convention on Corporate Accountability." Here is an instance where Prof. Tully's brief commentary is very helpful - he points out that the document was submitted by FoE at the 2002 World Summit on Sustainable Development in Johannesburg, an event that has all largely receding into memory.

One aspect distinguishing FoE's recommended convention is its binding nature, compared to the so-called "private voluntary initiatives" (or PVIs) populating the book (maybe this explains why the convention has not been adopted!) This is an instance where a tidbit from the preface helps inform readers, as Prof. Tully expounds on how corporations as non-states are largely "invisible" to international law.

"However, it is characteristic of the incremental lawmaking process that formally non-binding materials (so-called 'soft law') subsequently undergoes a process of 'hardening,'" Prof. Tully writes.

In other words, codes that start out as voluntary initiatives eventually work their way into the fabric of legal precedents. All the more reason to understand all the material in the book. Indeed, the very publishing of the book may advance the very calcification of these norms.

The book of course includes such well-known codes as the Ceres Principles (written in response to the Exxon *Valdez* oil spill), Sullivan Principles (conceived in response to South African apartheid), and MacBride Principles (addressing corporate involvement in Northern Ireland). It also includes codes that may deserve a higher profile - such as the Global Exchange/ International Labor Rights Fund US Business Principles for Human Rights of Workers in China - given recent and long-standing reports of human rights abuses in China.

Oddly, the book does not include some very high profile codes, such as the Equator Principles, a banking industry initiative covering project finance, or its competitor, the Collevecchio Declaration on Financial Institutions and Sustainability, which nongovernmental organizations prefer. (The EPs are mentioned under the UNEP Statement by Financial Institutions on the Environment and Sustainable Development , which at this point is much less widely recognized than the EPs.)

The book also gives short shrift to some very significant reporting codes. It dumps the Global Reporting Initiative, Social Accountability International SA8000, and AccountAbility AA1000 standards into a final chapter without naming them in the table of contents or including any of their text in the chapter.

Given the enormity of the task, it is certainly understandable that the book falls somewhat short of being completely comprehensive - indeed, achieving such a goal would prove impossible. In many ways, beyond being an important reference resource, the book's significance is in its very being - the fact that codes of corporate responsibility are being compiled demonstrates an acknowledgement of their value.

Source: SocialFunds.com, 4 August 2006

BP SHUTTERS PRUDHOE BAY FIELD DUE TO PIPELINE LEAK

BP began yesterday to shut down its Prudhoe Bay oilfield, the biggest field in the United States, cutting U.S. production by up to 8 percent and giving no estimate of how long the field would be offline.

The outage will cut global daily output by about 0.5 percent and has already sent U.S. crude oil futures up almost 2 percent. Prudhoe Bay, on Alaska's North Slope, supplies about 8 percent of U.S. domestic crude production.

An Energy Department spokesman said the agency would consider loans from the Strategic Petroleum Reserve if refiners seek them. "If there is a request for oil we'll certainly take a serious look at that," said Craig Stevens. He said DOE will be in touch with refiners today to assess their needs (H. Josef Hebert, AP/ *Houston Chronicle*).

Energy Secretary Samuel Bodman told reporters today that he was not aware of any requests, but he said that if there are, oil "would be made available and we can get it to the West Coast." Bodman said that both loans and sales could be considered.

"That is exactly what [the SPR] was intended to do, to deal with disruptions of supply," Bodman said. He said the federal government could provide SPR oil to West Coast refiners either by barge or by "exchange." Under an exchange, one refiner would provide oil to another in need of supply, and DOE would provide the first refiner with SPR oil.

"At this point I am obviously concerned about it, but until we know the facts I will not be able to say much more," Bodman added, referring to the Prudhoe Bay shutdown.

Rep. Dingell calls for hearings

Congress has left Washington for the August recess, but at least one senior House Democrat has called for hearings into the Prudhoe Bay leak. "It is appalling that BP let this critical pipeline deteriorate to the point that a major production shutdown was necessary," said Rep. John Dingell (D-Mich.), the ranking member of the House Energy and Commerce Committee, in a statement. "The United States Congress has an obligation to hold hearings to determine what broke down here and what laws and regulations need to be improved to ensure problem pipelines like these are found and fixed earlier."

BP said it began closing the pipeline after it found "unexpectedly severe corrosion" during inspections resulting from a 200,000-gallon oil spill in March. Data received on Friday from a pipeline scanner showed 16 irregularities in a transit line on the eastern side of the field, and follow-up inspections found corrosion, a leak and a small spill of four to five barrels, or about 200 gallons, spokesman Daren Beaudo said.

"We regret that it is necessary to take this action and we apologize to the nation and the state of Alaska for the adverse impacts it will cause," said BP America Chairman Bob Malone in a statement (Rosen/Campbell, Reuters).

The 400,000-bpd shutdown will reduce Alaska's tax and royalty revenue by millions of dollars per day, and shutting the field down will take days more to complete. BP officials said the field will remain closed until the pipes are proven safe or until other pipes can be installed to bypass the damaged ones.

BP last month announced a $50 million initiative to inspect, clean and replace Prudhoe pipelines. The March spill leaked oil over 2 acres of tundra and was the largest spill on the North Slope since production began there in 1977 (Loy/Richtmyer, *Anchorage Daily News*).

Analysts said that while the shutdown would not drastically affect supplies, prices would rise in the short term due to psychological factors.

"The U.S. market is actually well-supplied; crude inventories are very high," said Purvin & Getz analyst Victor Shum. "So while this won't have any immediate impact on U.S. supplies, the market is in very high anxiety. So any significant disruption, traders will take that into account, even though there is no threat of a supply shortage" (Mary Pemberton, AP/ *San Francisco Chronicle* online).

BP had already cut daily production by about 23,000 bpd following the March spill. Among BP's other troubles is a criminal investigation over a March 2005 explosion in Texas City, Texas, that killed 15 workers and allegations from the Justice Department that BP traders illegally tried to corner the propane market in early 2004 (Jim Carlton, *Wall Street Journal* [subscription required]).

Source: Greenwire, 7 August 2006 - (All cites Aug. 7.) **–** Debra Kahn with additional reporting from Ben Geman

GM TOPS MOTOR VEHICLES SECTOR SUSTAINABILITY REPORTING

GreenBiz.com, 7 August 2006 - General Motors achieved the highest ranking in environmental and sustainability reporting of the 30 companies in the motor vehicles and parts sector whose environmental and sustainability reporting was analyzed by the Roberts Environmental Center.

In the center's Pacific Sustainability Index, Volkswagen leapfrogged Ford, Toyota, BMW, and DaimlerChrysler to achieve second place. Japan's Denso moved from tenth place in 2005 to fourth place, the highest score in the parts section of the sector, with a grade of A; Johnson Controls (U. S.), the next highest scoring firm in the parts sector, achieved a respectable B.

The lowest scores, a result of failure to post more than a minimal amount of company-specific environmental or social information on their web sites, went to American aircraft maker Lear, Canada's Magna International, and the Turkish company Koc Holding, all with grades of D-.

According to the Roberts Center, "there is a moderate positive relationship between company size and quality of reporting, driven both by the low scores of the smallest companies in our sample and by the high scores of three of the largest players. Almost the full range of scores was seen in firms with revenues around $24 billion, with Denso much higher than average for its size. The smallest firm in the sector, the Man Group (Germany) obtained a slightly better than average C+."

All materials were scored using the Center's Pacific Sustainability Index, which also provides scores for six subcategories of reporting. The highest scores for these went to VW for expressed environmental intent, Denso for environmental reporting transparency, Toyota for quantitative environmental performance, GM for expressed social intent, VW for social reporting transparency, and VW for quantitative social performance.

In this sector the most reported environmental variables were energy use, waste recycled, product performance, and water use. The most reported social information was employee health and safety, community education and development, and consumer health and safety.

These findings are based on the information available on the web sites of the largest 30 companies in the motor vehicles and parts sector of the 2005 Fortune Global 500 and Fortune 1000 lists as of February 28, 2006. All firms were invited to review and comment on the analysis prior to publication, and many brought to our attention relevant information, unlinked, unreferenced, or otherwise "hidden" on their web sites that raised their scores. Better web site navigation tools for environmental and sustainability information are clearly needed on many sites.

CORPORATE SOCIAL FOOTPRINTS – CLIMATE PERFORMANCE

The Center for Sustainable Innovation has introduced a new application of its "social footprint" method for calculating corporate social bottom lines, this time for global warming.

The report includes six detailed examples of global warming bottom lines calculated for BT, BP, Shell, Johnson & Johnson, United Technologies Corporation, and an anonymous university. Only half of them scored sustainably.

Unlike other corporate global warming reporting tools, the Social Footprint's treatment of greenhouse gas (GHG) emissions by organizations is deeply rooted in the science of climatology.

Of particular significance is its use of a scientific forecast that shows how carbon emissions, in particular, must be curtailed in the years ahead if humanity is to have a chance of reversing the current trend.

Thus, each example featured in today's report compares actual organizational emissions of carbon between the years 2001 and 2005 with what such emissions would have to be in order to reverse global warming and stabilize CO_2 concentrations in the earth's atmosphere.

Only organizations that emit carbon within those limits can score sustainably under CSI's approach. Free downloadable copies of the report can be found at http://www.sustainableinnovation.org/Global-Warming-Footprint.pdf.

This distinctive, yet simple, approach to sustainability measurement and reporting is markedly different from other competing approaches, especially those that rely on econometric or even ecological criteria.

It differs from pure ecological models in the sense that it focuses not just on ecological thresholds *per se*, but also on the social question of whether an organization's contributions to mitigating climate change are proportionately sustainable relative to some collective plan of action.

Interestingly, the report issued today shows that even large multi-national corporations can score sustainably when measured against a social standard for achieving ecological ends, despite the fact that their current ecological footprints might be unsustainable.

To say that an organization's operations are ecologically unsustainable tells us nothing about what they may or may not be doing to address the problem.

Many companies, in fact, are taking steps to reduce their carbon emissions at a pace consistent with scientifically-grounded plans to reverse global warming. The Social Footprint gives visibility to those efforts.

Indeed, CSI's Executive Director, Mark W. McElroy, had this to say about today's announcement: "This report shows that the Social Footprint has a mainstream role to play in the current global effort to mitigate greenhouse gases.

What it shows us is that even companies who may be scoring unsustainably in an ecological sense can score sustainably in a social sense, both relative to global warming.

As long as a company is taking steps to reduce emissions in accordance with a global mitigation plan, their social bottom line can be cast accordingly. The Social Footprint allows us to do this for the very first time in a powerful new way."

Source: GreenBiz.com, 15 August 2006

CALL FOR PAPERS – FROM APCEA MEMBERS

ALL CHINA ECONOMICS INTERNATIONAL CONFERENCE

Dear Professor Burritt,

We are the APEC Study Center of the City University of Hong Kong. For advancing the studies and research in Economics, we are organizing a conference, namely, the All China Economics (ACE) International Conference which will be held in Hong Kong this December.

We sincerely invite you and colleagues from your *Asia-Pacific Centre for Environmental Accountability* to submit papers and participate in this event. Furthermore, we are most grateful if you would help us to forward our message as attached to your fellow teachers, economists, researchers and research students. Please visit our site at www.cityu.edu.hk/apec/ace for more details and contact us at aceinfo@cityu.edu.hk if you have any enquiries. Thank you for your kind support in advance.

We look forwards to hearing from you soon.
Best regards, The Conference Secretariat
ACE International Conference

All China Economics International Conference
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APEC Study Center, City University of Hong Kong announces The Inaugural All China Economics (ACE) International Conference December 18 – 20, 2006, Hong Kong

Call for Papers and Session Organizers

Dear Economists, Scholars, Researchers, Educators, Policy-makers and Professionals,

The APEC Study Center is pleased to announce that it will host the inaugural *All China Economics (ACE) International Conference*. The Conference now calls for submissions for presentation.

The *ACE International Conference* will take place at the City University of Hong Kong on December 18 – 20, 2006. It aims at bringing together academics, professionals and students from China, APEC members and world economies to share ideas on recent economic studies and research findings. In addition to a series of presentation sessions, internationally renowned speakers will review current economic issues. The Conference will provide an invaluable opportunity for presenters and participants to meet and network with their counterparts from different world regions and discipline areas.

On behalf of the APEC Study Center, I am pleased to invite you to submit an abstract of a paper and/or to organize a presentation session for the Conference.

A list of suggested topics is available at our "ACE Theme" section of the Conference website. Submissions for presentation will go through a rigorous double-blind review process before acceptance. After the Conference, selected papers among presentations will be published in the Conference Proceedings. As a token of appreciation, participants who organize and chair a session will be honored with a registration fee waiver.

For details of the inaugural ACE International Conference, please visit our website at www.cityu.edu.hk/apec/ace.

Join us now and contribute your thoughts on the development of the world economy. We look forward to welcoming you to the City University of Hong Kong.

Yours faithfully,

Dr. Kui-Wai Li Conference Director

ENVIRONMENTAL MANAGEMENT ACCOUNTING NETWORK (EMAN) AFRICA

Conference Announcement and Call for Papers

The Environmental Management Accounting Network (EMAN) Africa in partnership with the Environmental and Sustainability Management Accounting Research and Innovation Niche Area of the Faculty of Economics and Finance in TUT will host the 1st EMAN-Global Conference on Wednesday 24th – Friday 26th October 2007 at The Tshwane University of Technology (TUT) Prestige Auditorium, Tshwane (Pretoria), South Africa.

International Keynote Speakers will include:

- **Prof. Dr. Stefan Schaltegger**, Chair of Corporate Environmental Management, The University of Lüneburg, Germany

- **Mr. Tarcisio Alvarez-Rivero**, Division for Sustainable Development of the United Nations Department of Economic and Social Affairs (DSD/UNDESA).

- **Dr Christine Jasch**, Director, Austrian Institute for Environmental Management & Economics, Vienna, Austria

The keynote speeches will revolve around the integration of environmental management accounting with other ecological systems as a tool for sustainable development.

The theme of the conference is:

Integrated Environmental Management Accounting (EMA) for Sustainable Development

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their needs. EMA incorporates and integrates two of the three building blocks of sustainable development - environment and economics - as they relate to an organisation's internal decision-making. Meeting the needs of the future generation depends on how well economic, social, and environmental objectives of sustainable development are interconnected and balanced during current decision-making processes. EMA provides the economic rationale for organisational involvement in sustainable development. Environmental management accounting serves as a mechanism to identify and measure the full spectrum of environmental costs of current production processes and the economic benefits of pollution prevention or cleaner processes, and to integrate these costs and benefits into day-to-day business decision-making.

The conference theme addresses the question of how organisations can integrate EMA with other environmental management tools (Cleaner Production, Environment Management Systems, Risk Management, Sustainability Reporting and Audits) to achieve sustainable development. It seeks and brings together an international and interdisciplinary audience to begin to tackle many of the issues connected with EMA and sustainable development - to share experiences and to begin to work towards solutions. By building informal partnerships and in offering opportunities to share ideas this conference seeks to move this complex debate forward.

The conference seeks contributions on the integration and application of environmental management accounting with/to other sustainable development tools and the following sub themes:

- EMA for Capital Investment Projects and Decision-Making
- EMA and Environmental Management Systems (EMS)
- EMA and Environmental Performance Evaluation
- EMA and Sustainability Reporting and Audits
- EMA and Cleaner Production
- EMA for Sustainable Supply Chain

Papers are invited on any of the above sub themes and broadly on EMA research, practice and case studies from researchers, government authorities, policy-makers and corporate representatives.

Potential participants are required to supply a one page abstract using the online submission system at www. Eman-africa.com. Early submissions are encouraged.

The following deadlines are applicable

- Submission of abstracts **January 30th 2007**
- Notification of acceptance of abstract **February 28th 2007**
- Submission of full papers **May 30th 2007**
- Notification of acceptance of full paper **July 30th 2007**
- Final paper and power point presentation **August 30th 2007**

All papers will be subject to a double blind review process

Further information is available from: http://www.eman-africa.com/content/view/22/12/