



CLASS OF 2006:

*Industry Report Cards
on environment and
social responsibility*

UNITED NATIONS ENVIRONMENT PROGRAMME



INDUSTRY AS A PARTNER FOR SUSTAINABLE DEVELOPMENT SERIES

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Foreword

Four years after WSSD: learning by doing

When UNEP facilitated the preparation of industry sector reports for the World Summit on Sustainable Development (WSSD), one thing was evident: the availability of macro-level data on a sectoral and global basis was very limited. This was related, in part, to the absence of sector-specific associations, particularly in developing country regions. This was also related to resource constraints, capacity problems and lack of a concerted effort to enforce requirements of local regulations and international agreements.

Four years later, there are some signs of hope coming from the class of 2006. The sector updates that you find in this publication show some significant steps towards getting policy, programmes and reporting systems in place. This is especially evident with respect to key global issues—notably climate change—and in high impact industries that face heavy criticism from stakeholders and public institutions.

If numbers and statistics are not available, at least new policies and programmes have been introduced in a number of instances. The first steps towards measurement and improved management are being taken. While for some business and industry organisations the presentation of collective greenhouse gas emissions may be relatively uncomplicated to produce, there are a range of other sustainability issues on which the best we could hope for at this stage is getting collective policies and action programmes in place. Not every issue can be encapsulated in simple numbers. But whether one has, for example, a collective policy with goals and a programme with objectives can be very telling. Having said this, it must be mentioned that some industry sector organisations appear to stick to old models of industrial development that have lost the track towards sustainable development.

Discussions on “Industrial Development” at the fourteenth and fifteenth sessions of the Commission on Sustainable Development (CSD) present the

opportunity to take stock of progress made since the WSSD commitments of 2002. It also ensures we keep our commitment to continual improvement in measuring, tracking and communicating progress on key agenda items on the global sustainable development agenda. Of key importance in the debate on Industrial Development are the calls made in the Johannesburg Plan of Implementation for sustainable consumption and production as well as corporate environmental and social responsibility. The 30 Report Cards presented in the pages that follow provide plenty of food for thought in discussing industry action in response to these calls.

I wish to congratulate the organisations who accepted our invitation to participate in the ongoing *Industry as a Partner for Sustainable Development* process. Let me also thank governments, public and private sector institutions who supported our work over the last four years.

Our publication starts with an overview and analysis of the Report Cards, for which we thank two lead authors who worked closely with us: Paul Hohnen and Tom Rotherham of the International Institute for Sustainable Development (IISD). They have done excellent work in facilitating the Paris and New York dialogue meetings and finalising the compilation of this publication.

The publication concludes with some highlights of progress towards commitments we made in 2002, activities over the last four years by UNEP in the field of technology, industry and economics. It is a period in which we celebrated the thirtieth anniversary of the UNEP Division of Technology, Industry and Economics. We look forward to continue working with business and industry and other stakeholder partners in continuing the dialogue, coupled with action in all regions to meet the urgent challenges we face.

Monique Barbut
Director, UNEP Division of Technology, Industry and Economics (DTIE)
May 2006

OVERVIEW



Industry as a Partner for Sustainable Development: The 2006 UNEP overview¹

1. Background

In 2001–2002, UNEP convened a group of industry associations, business initiatives and organisations² representing 22 sectors, and facilitated the development of reports on their respective contributions to sustainable development over the previous 10 years.. The result was a set of 22 in-depth industry sector reports that represented an internationally co-ordinated assessment of industry's contribution to sustainable development. An accompanying summary report, entitled *10 Years after Rio: The UNEP assessment*, summarised industry's progress and identified unfinished business and future challenges in implementing Agenda 21.³ It also outlined five general recommendations that could help improve industry's capacity to contribute to sustainable development. In so doing, the process contributed to the UN World Summit on Sustainable Development (WSSD) in 2002 and provided recommendations to help promote sustainable business practices.

On the release of the report in 2002, UNEP's then Executive Director Klaus Toepfer underscored the importance of the exercise. *"Industry,"* he said, *"is a key partner for sustainable development. We rely on industry, not only for reducing the environmental impacts of the products and services it provides us with, we also increasingly depend upon industry for the innovative and entrepreneurial skills that are needed to help meet sustainability challenges."*

Encouraged by the depth and breadth of the industry response, UNEP decided to propose a follow-up process. This was also driven by the recognition—highlighted in the 2002 assessment—that there was *"a widening gap between the efforts they [industry] have made and the worsening global environmental situation."*

If industry was supportive of a follow-up process, the outcomes would be able to feed into the fourteenth and fifteenth sessions of the UN Commission on Sustainable Development (CSD), where discussions were to focus on the topic of "Industrial Development." The outputs of this sector progress review would enable both UNEP and the participating industry groups to make a substantive contribution to the UNCSD on the state of industrial development today and its contribution to sustainable development.

2. The Report Card process

In June 2005, UNEP formally invited a wide range of business and industry groups to Paris to participate in a consultative workshop to assess interest in, and the scope of, a follow-up to the WSSD sector reports process. Based on inputs provided at the workshop and responses received by e-mail from its business, industry and related stakeholder network, UNEP decided to embark on a successor process, but with two key differences.

Length: In recognition of the fact that the 2002 reports were lengthy, detailed and, in most cases, still relevant, UNEP requested industry to limit the reports to three pages in the form of "Report Cards." Although short, these "mini" Report Cards would serve to enable industry sectors to take stock of their own progress and to share it with stakeholders in a concise format.

Structure: To encourage consistency, it was proposed that all the Report Cards would follow a template with three sections addressing "Work in progress," "Future challenges," and "Partnership opportunities." Building on the conclusions of the 2002 sector reports, these headings were intended to enable industry to focus on highlights and provide a forward-looking perspective.

Business and industry organisations—some associations and some initiatives—representing 29 industry sectors, as well as one labour organisation, accepted UNEP's invitation and prepared a total of 30

¹ *The compilation of this publication was initiated and co-ordinated by UNEP. The relevant business and industry groups drafted their respective contributions and assume full responsibility for the contents of each of the 30 sector Report Cards. The overview chapter was written by UNEP with the support of the International Institute for Sustainable Development (IISD) and its consultants Paul Hohnen and Tom Rotherham. UNEP assumes full responsibility for the accuracy of the overview chapter and the views expressed in it.*

² *For ease of reference, these diverse organisations are hereinafter referred to as "industry groups."*

³ http://www.unep.fr/outreach/wssd/contributions/sector_reports/reports.htm

Report Cards. These included the majority of industries that reported in 2002, and 10 first-time reporters. Only two industry sectors that reported in 2002 decided not to participate (aviation and water management). The industry groups that developed the Report Cards are listed in their respective Report Card and in Annex 1. The following table lists the sectors for which Report Cards were prepared, and indicates whether the relevant industry group that participated has a global (G) or regional (R) membership.⁴

“Second Round” Reporting Sectors	“First Time” Reporting Sectors
1. Accounting (G)	1. Cement (R)
2. Advertising (R)	2. Coffee (G)
3. Aluminium (G)	3. Detergents (R)
4. Automotive (R)	4. Forest and Paper (G)
5. Chemicals (G)	5. Liquefied Petroleum Gas (G)
6. Coal (G)	6. Mining (G)
7. Construction (R)	7. Postal Services (G)
8. Consulting Engineering (G)	8. Public Transport (G)
9. Electricity – e7 (G)	9. Electricity – Renewables (R)
10. Fertilizer (G)	
11. Finance (G)	10. Organised Labour (multi-sector, G)
12. Food and Drink (R)	
13. Information and Communications Technology (R)	
14. Iron and Steel (G)	
15. Oil and Gas (G)	
16. Railways (G)	
17. Refrigeration (R)	
18. Road Transport (G)	
19. Tourism (G)	
20. Waste Management (G)	

It should be noted that the industry groups participating in this process do not necessarily represent the entirety of their sectors. Most of them have different degrees of company representation and geographical coverage.

Similar to the industry-led approach taken in 2002, each industry group had complete editorial control over its own Report Card. UNEP’s role in the process was that of a facilitator. This included setting the overall framework for the process; convening a multi-

stakeholder meeting to provide comments on early drafts of the Report Cards; posting draft and final Report Cards on its Web site; seeking online comments from stakeholders; and hosting a high-level report launch event at the CSD-14 meeting of May 2006 at UN Headquarters. To assist with this process, UNEP engaged the International Institute for Sustainable Development (IISD) to act as consultant to the initiative. IISD’s tasks included co-organisation of the October 2005 (Paris) and May 2006 (New York) meetings and the preparation, in co-operation with UNEP, of this overview report.

The sections below provide a summary overview of the Report Cards, together with suggestions for issues that could be addressed, and follow-up action that could be taken, in preparation for CSD-15 and beyond. The suggestions are inspired by UNEP’s earlier work on the role of business and industry associations as catalysts for change and focal points for stakeholder engagement in advance of sustainable development.⁵

In this overview report, the information in the Report Cards has been reviewed and summarised both in relation to the three main sections in the Report Cards (Work in progress; Future challenges; and Partnership opportunities), as well as against the five general recommendations made by UNEP in its overall assessment report of 2002. The five recommendations focussed on:

- mainstreaming decision-making;
- improving voluntary initiatives;
- reporting;
- integrating social, environmental and economic issues; and
- recognising global responsibilities and opportunities.

When assessing the contents of this overview report and the 30 Report Cards that follow, readers are reminded that the Report Card authors were subject to a three-page length limit. Because of this limitation, the Report Cards could only ever capture the general direction and key highlights of initiatives and

⁴ Regional could be for example OECD or European.

⁵ See <http://www.unep.fr/outreach/bi/practices.htm> (“Catalysing Change: How industry associations can promote sustainable development,” UNEP 2003) and <http://www.unep.fr/outreach/home.htm> (“Practitioners’ Perspectives on Stakeholder Engagement,” Volume 1 by UNEP, Stakeholder Research Associates, AccountAbility 2005).

activities being undertaken. They neither reflect the full range of activities being undertaken by all companies within a sector, nor do they necessarily reflect the full scope of activities being undertaken by the industry group that co-ordinated the development of the Report Card.

The information provided in the Report Cards does, however, give a good general overview of the scope and types of the collective initiatives that have been undertaken by industry sectors since the WSSD and that are planned for the future. They also suggest the degree to which the industry groups have made progress on the commitments they made in 2002. For a more accurate picture of the range of initiatives being undertaken by industry groups and the pace of progress since 2002, readers are encouraged to read these updated Report Cards in conjunction with the 2002 sector reports, which are available at http://www.uneptie.org/outreach/wssd/contributions/sector_reports/reports.htm

"The Report Cards show that industry is making progress in delivering tangible contributions. Associations and companies that are leading the way deserve our praise for their practical efforts. But while the World Conservation Union welcomes their contribution, the declining state of our natural resources and the challenges before humanity as laid down in the MDGs require a much greater and more innovative push, including an increased engagement with other sectors of society."

Gabriel Lopez, Director, Global Strategies, IUCN – The World Conservation Union

3. Main findings

At the conclusion of its 2002 Assessment Report, UNEP made five recommendations for future action. These were aimed at improving industries' contribution to sustainable development. The analysis contained in this summary report is structured according to these five recommendations. In each of the 30 individual sector Report Cards, the information is organised into three sections addressing:

- Work in progress;
- Future challenges; and
- Partnership opportunities.

This summary report also seeks to provide an overall picture of the trends in each of these three areas. The trends in "Work in progress" and "Future challenges" are considered under each of the five recommendations. The trends in "Partnership opportunities" are considered separately in the concluding section of this overview chapter.

A. Recommendation 1: Mainstream decision-making

What UNEP recommended in 2002: Integrate environmental and sustainability criteria into mainstream business decision-making at all levels in the company, building local capacity worldwide to spread best practice from the leaders to the rest of industry, worldwide.

i. Work in progress

There are two types of information in the Report Cards that provide insights on mainstreaming: activities to spread sustainability throughout the sector; and business opportunities arising from sustainable development.

From the perspective of mainstreaming environmental and sustainability criteria through sector-level collaboration, all of the Report Cards describe activities and initiatives aimed at integrating sustainable development in decision-making throughout the sector. This is being done in a variety of ways, including:

- awareness raising with employees, consumers, suppliers and regulators;
- sharing best practice, including best available technology;
- delivering training programmes, including in developing countries;
- sharing achievements and dilemmas, including through award programmes and stakeholder events;
- identification of key risks and/or opportunities to be addressed;
- development of marketing strategies built on sustainability issues;
- reviewing supply chain practices and policies;
- researching and promoting new technologies or operating practices;

- development of sector-wide policy statements, charters, guidelines or codes;
- establishing sustainability or corporate responsibility committees to co-ordinate activities or provide expert advice;
- development of sector-specific targets or performance indicators and instruments; and
- developing or using sustainability reporting concepts and systems.

In some cases, the mainstreaming initiatives are also targeted both upstream at the supply or value chain, and downstream at buyers. While some of the sectors' initiatives address consumers directly (e.g. the coffee, detergents, and food and drink sectors), the focus is more often on private or public procurement. Also, especially in the cases of professional services sectors, there is often a focus on helping clients to mainstream sustainable development (e.g. the finance, consulting engineering and advertising sectors).

Second, the Report Cards also provide insights into how the business case for sustainable development is perceived at the sector level. From this, it is possible to infer some general conclusions about the degree to which sustainability is being mainstreamed at the company-level.

Rather than focus exclusively on the risks to their sectors, a majority of the sectors have identified and are pursuing opportunities arising from the challenge of sustainable development. This includes sectors such as iron and steel, which sees a potential new market for steel in more sustainable house construction; cement, which anticipates a growth in demand from the shift to more energy efficient buildings; and aluminium, which sees market opportunities from the trend of material substitution to reduce the weight of a range of products. Other sectors, including tourism, coffee and finance, have identified trends in consumer preferences that are giving rise to fast-growing niche markets, some of which may also become mainstream.

Still other sectors draw a more far-reaching conclusion, that the transition to a more sustainable market system or greater awareness of sustainability issues could have an absolute upside, growing the market, expanding the industry and improving profitability (e.g. LPG, renewables, public transport, railways and accounting).

ii. Future challenges

A number of industry groups refer to the need to continue to develop and expand the reach of their

mainstreaming initiatives. While most of these references are general in nature, some specifically address the need to spread best practice in developing countries. These are the forest and paper, chemicals, waste management, accounting, postal services and consulting engineering sectors. That said, few of the industry groups that submitted reports mention the existence of strong networks in developing countries. The development of these networks could be an important area of future work.

A number of industry groups have initiated activities related to the corporate responsibility (CR) agenda, which is a framework that focuses on the better integration of economic, environmental and social issues in decision-making. There is, however, a risk that CR initiatives do not adequately reflect the broader public policy agenda.

While the sustainable lifestyle agenda, for example, is very relevant to integration, the Report Cards make little mention of it, or of supporting tools such as life cycle assessment (LCA), de-materialisation or an integrated approach to sustainable consumption and production. An interesting exception here was the reference by the railways sector to its development of new LCA-based indicators for the purchasing of new trains. More specifically, no mention is made of the 10-year framework of programmes on sustainable consumption and production (Marrakech Process), a major governmental initiative co-ordinated by UNEP and the UN Department of Economic and Social Affairs (DESA).⁶

B. Recommendation 2: Improve voluntary initiatives

What UNEP recommended in 2002: Make voluntary initiatives more effective and credible as a complement to government measures, and assess improvements in environmental and social performance through reporting.

i. Work in progress

Since making this recommendation, there has been a remarkable flourishing in the number and scope of voluntary instruments that have been developed to address sustainable development. In particular, voluntary instruments have increasingly been seen as a complement or alternative to regulation.

Almost all industry groups referred to voluntary initiatives that they had initiated or helped to develop. This includes international or cross-sectoral

⁶ <http://www.unep.fr/sustain/10year/home.htm>

initiatives such as the UN Global Compact; the UNEP/SETAC Life Cycle Initiative; UNEP's APELL programme; the Equator Principles; the Extractive Industries Transparency Initiative (EITI); the Global Reporting Initiative (GRI); and the ISO 14000 series of environmental management standards.

“We will not make the progress that is needed unless and until consumers can make choices based on clear and accurate information about the products and services they are offered, both in terms of how their production and use impacts consumers, environment and the workforce. Industry groups share responsibility, along with governments, to ensure that the conditions are created so that consumers can make choices that reduce negative impacts.”

Bjarne Pedersen, Head of Policy and Advocacy, Consumers International

Many industries also reported the development of sector-specific voluntary standards. Some of these have been developed in consultation with regulatory authorities (e.g. the automotive sector's fuel efficiency standards in Europe), while others were unilaterally developed (e.g. the tourism sector's guidelines on prevention of exploitation of children, and the chemical sector's Responsible Care® initiative). However, with the exception of the forest and paper sector, very few referred directly to the need for, value of, or challenges from certification and labelling initiatives.

The Report Cards provided less information on the potential or actual impacts of these voluntary initiatives. This may be an example of how the length of the Report Cards prevents presentation of a full picture of “work in progress,” in particular because the Report Cards do not provide aggregated information on company-level activities. It may also be a result of the newness of many initiatives. It takes time to get an initiative off the ground, see results and collect data. Many of the initiatives launched since Johannesburg may not yet have reached that level of maturity.

It is well known that many companies in the various reporting sectors have signed initiatives such as the UN Global Compact,⁷ and/or use the OECD Guidelines for Multinational Enterprises,⁸ EMAS or some other new environmental and social responsibility instruments. As mentioned above, many of the industry group's members are also using the ISO 14001 environmental management system (EMS) standard at the plant or company level.⁹

At the time of writing, a total of 15 global business organisations (which include company members

across a number of sectors), were formally participating in the UN Global Compact, together with a further 140 local business organisations.¹⁰ One industry association—the postal services sector—has signed the Global Compact, thereby committing itself and its members to advancing the Compact's 10 principles.

UN Global Compact: Business participation by relevant sectors (2006)

Sector	Number of participating business organisations
Automobiles and Components	70
Chemical	60
Construction and Engineering	123
Finance and Insurance	246
Food and Drink	188
IT Consulting and Software	99
Metals and Mining	68
Oil and Gas	72
Paper and Forest Products	33
Personal Care and Household Products	65
Telecommunication	51
Tourism and Leisure	56
Transportation and Storage	59
Utilities	95

Although there were some references made to the ISO 14001 EMS standard and the ISO 14063 standard on environmental communications, there were no references to much of ISO's other work. A number of sectors, including cement, and forest and paper, reported participating in the development of the World Business Council for Sustainable Development/World Resources Institute (WBCSD-WRI) greenhouse gas monitoring and reporting protocols. Other sectors (e.g. oil and gas) have also developed their specific protocols for GHG emissions reporting, building on their own effort as well as the WBCSD-WRI work. None referred to the development of similar standards in ISO (i.e. ISO 14064, 14065) and none mentioned the ongoing development of the ISO 26000 guidance standard on social responsibility.

⁷ <http://www.globalcompact.org>

⁸ <http://www.oecd.org/dataoecd/12/21/1903291.pdf>

⁹ <http://www.iso.org>; <http://www.tc207.org/>

¹⁰ http://www.unglobalcompact.org/ParticipantsAndStakeholders/business_associations.html

ii. Future challenges

Clearly voluntary instruments are more widely used now than they were in 2002. As the chemicals sector reports:

“Fifteen years ago just a handful of countries had launched Responsible Care® programmes, but by 2002 it had been adopted in 47 countries around the world. In 2004, we welcomed five new member countries from Eastern Europe: Bulgaria, Estonia, Latvia, Lithuania and Slovenia. Moreover, the outreach to new observer members, such as China and other Asian countries, will help to further establish Responsible Care® in this important region.”

A number of sectors, including aluminium, forest and paper, chemicals, consulting engineering, mining and waste management, underline the need to continue to spread the use of voluntary initiatives, particularly in developing countries.

However, among the future challenges for voluntary initiatives not addressed by the Report Cards was the need to understand better and promote:

- their legitimacy, especially regarding stakeholder involvement and their capacity to engage SMEs and companies from developing countries;
- their inter-operability and consistency; and
- demonstrable proof of their effectiveness in delivering improved performance (compared to “business as usual”), in particular in complementing or pre-empting regulatory responses.¹¹

C. Recommendation 3: Reporting

What UNEP said in 2002: Help ensure transparency, assess performance improvements and spread environmental and sustainability practices beyond the pioneering companies to the silent majority.

i. Work in progress

The 2006 Report Cards show a clear rise in interest in sustainability reporting. Initiatives to promote reporting are now common across almost all sectors and are often a key reason why companies begin to take a comprehensive approach to managing sustainability. It forms part of an ongoing debate on how to better measure, track, communicate and benchmark progress. The Report Cards also show early

signs of business and industry organisations getting collective reporting programmes in place and reporting collective performance against key indicators such as greenhouse gas emissions. One of the pioneers in this has been the European Telecommunication Network Operators Association (ETNO), a member of the Global e-Sustainability Initiative (GeSI).¹²

As with other types of voluntary initiatives, while different sectors take different approaches, there seems to be a common evolutionary path. At one end, some sectors have developed comprehensive sector-specific guidelines for reporting. These also often include guidance on implementation and assurance processes. Others sectors have more general guidance, often in the form of selected indicators to facilitate reporting on key issues (e.g. lost time injury, GHG emissions, energy efficiency).

While some sectors take their own approach to reporting, such as the oil and gas, and detergents sectors, the GRI is emerging as the recognised international best practice. While fewer than 200 companies used the GRI Sustainability Reporting Guidelines in 2002, over 800 organisations—including companies of all sizes, public agencies and civil society organisations—now explicitly reference the GRI in their reports. In an important new development, a significant number of sectors have also developed a formal GRI sector supplement. This includes the tourism, mining, ICT, finance and automotive sectors.

GRI: Business participation by relevant sectors (2006)

Sector	Number of organisations using GRI
Financial Services	94
Food and Beverages	51
Energy	46
Energy Utilities	46
Telecommunications	39
Mining	36
Automotive	35
Chemicals	29
Forest and Paper Products	27
Healthcare/Equipment (equal)	26 each

¹¹ For example, see: “The Trade and Environmental Effects of Ecolabels: Assessment and Response”; UNEP, 2005. <http://www.unep.ch/etb/publications/Ecolabelpap141005f.pdf>

¹² <http://www.etno.be>; for more information see the ICT Report Card.

The growing importance of sustainability reporting is underscored by the fact that an increasing number of bodies within the accounting sector are in the process of developing standards or guidance documents on sustainability reporting and assurance. Business organisations and individual companies alike are being confronted with new approaches to assurance, including formal and systematic stakeholder engagement such as that promoted by the voluntary AA1000 standard.¹³

“We find it problematic to comment on industry performance when it is not clear whether associations or initiatives represent the whole sector or the sector globally. Also, tracking progress is difficult when business and industry organisations show a lack of reporting of quantified information and using clear performance indicators.”

*Jean-Luc Roux, Political Director,
Greenpeace International*

ii. Future challenges

While the accounting sector Report Card documented a variety of initiatives to raise the quality, level and verification of sustainability reporting, and other sectors referred generally to the need to improve reporting quality and quantity, very few reports addressed this in detail. There appear to be three main issues.

The first is whether the practice of reporting can become more commonplace. While a large number of organisations now report, the fact remains that the majority of companies still do not communicate and report publicly their economic, social and environmental performance. This is illustrated by the fact that some of the Report Cards did not mention reporting among their activities and achievements.¹⁴

A second issue is the need to ensure that the indicators developed are relevant, meaningful and of material significance to the business case for sustainable development. While being particularly enthusiastic about the importance of sustainability reporting, the ICT report, prepared by the GeSI initiative, cautioned on the difficulties to be overcome:

“Sustainability reporting should become normal practice: the number of companies that do so is growing. This is due to, among others, increased stakeholder pressure/demand and financial rating becoming more popular. Reporting should provide an accurate picture of the business and therefore

be focussed on specific ICT-related issues. Identifying and agreeing on indicators in the sector and with stakeholders is not so straightforward. Developing indicators that show the sustainability impacts of ICT across society as a whole are extremely challenging to develop.”

While there is growing evidence that reporting can lead to companies taking a more consistent and comprehensive approach to managing sustainability issues, more work is needed to better understand how reporting can lead to improvements in performance. This will relate also to issues such as what information is required, by whom, and for what reasons.

A third issue relates to the credibility of reports, and in particular the assurance of the data reported. In this regard, the recent work described by the accounting sector to develop guides on sustainability reporting and assurance may result in more and better reporting over time, as may the “Third Generation” or “G3” version of the GRI Guidelines, which is scheduled for release in October 2006.

D. Recommendation 4: Integration of social, environmental and economic issues

What UNEP said in 2002: Move from the current approach of dealing separately with environmental, social and economic aspects of sustainable development, to an integrated approach to addressing global challenges.

i. Work in progress

As most of the Report Cards pay significantly more attention to environmental issues than they do to either social or economic ones, it is tempting to conclude that industry groups still have some way to go in adopting an integrated “triple bottom line” approach.

However, care needs to be exercised in interpreting the Report Cards. While UNEP did explicitly encourage industry groups to address all three pillars of sustainable development, some associations have an environmental mandate. In addition, when deciding what information to exclude from the three-page Report Cards, some industry groups may well have focussed on environmental issues given that the process was facilitated by UNEP.

¹³ <http://www.accountability.org.uk/aa1000/default.asp>

¹⁴ *The type and amount of information collected by a sector association does not imply, however, that some, or even many, individual companies are not doing sustainability reporting.*

Apart from baseline data on worldwide employment figures or net revenues, the *economic aspects* of sustainability performance tend not to be highly profiled in the Report Cards. Notable exceptions are the mining sector's research into the causes of the "resource curse," the postal services sector's assessment of the economic contribution of post office networks, and the LPG and mainstream electricity sectors' strong focus on poverty reduction and the UN Millennium Development Goals (MDGs).

In terms of *social aspects*, some Report Cards—in particular from the extractive industries—highlight initiatives aimed at improving worker health and safety. This is evident in reports such as that of the aluminium sector (where targets have been set for reducing time lost and employee exposure), and the mining sector (where a shared database has been created to benchmark peer site performance). The organised labour Report Card provides worrying statistics on environment, health and safety, reminding us of the ongoing seriousness of the matter. Furthermore, few reports—such as the mining sector's reference to a Community Development Toolkit—address social issues beyond the factory wall.

The one issue that gets most common and focussed attention across all of the Report Cards is climate change. Climate change is addressed in two ways:

First, the vast majority of the sectors are focussed on efforts to increase energy efficiency or to reduce GHG emissions. Some sectors, such as aluminium and cement, have set specific energy efficiency or voluntary emission reduction targets. Others, such as forest and paper, have reduced emissions by increasing the use of renewable sources of energy and/or higher efficiency combined heat and power equipment. Other sectors focus on CO₂ capture and sequestration. Importantly, a number of sectors recognise the role that regulatory instruments, such as the EU Emissions Trading Scheme, play in promoting emissions reductions.

Second, some sectors have found a potential competitive advantage in being naturally lower-carbon emitters. These include the renewable energy sector, the rail transport sector and the liquefied petroleum gas (LPG) sector, which see themselves playing an important role in de-carbonising energy and transport systems.

While most sectors report on policies or programmes to promote emissions reductions, monitor their GHG emissions policies and indicate success to date, in many cases, but not all, specific GHG reduction targets or actual emission data are not reported.

While other *environmental issues* are mentioned, they received considerably less consistent attention. These include:

- a) *specific issues*, such as chemical safety (referenced by the chemicals and detergents sectors); land use (cited by the aluminium, food and drink, forest and paper, and rail sectors); water use (noted by the aluminium and detergents sectors); as well as biodiversity management (listed by the coffee and mining sectors).
- b) *thematic issues*, such as reduction of materials use (a dilemma raised by the construction sector); reduction of packaging and waste (highlighted by the food and drink sector); and recycling (referenced by the aluminium, automotive manufacturing, and forest and paper sectors).
- c) *management tools*, such as the role of life cycle analysis (construction, detergents, mining and aluminium sectors); risk assessment (including the chemicals, detergents and mining sectors); and labelling and certification (forest and paper sector).

“As UNEP further develops the reporting process from the WSSD into Report Cards for CSD, we trust that significant information will become available to show progress and areas where future efforts need to focus. Yet transforming an informed public into an active and engaging public can only take place with new allies. Analysts have commented that customers today have moved from being recipients of products and services at the end of the value chain to becoming an integral part of the upstream business planning and production. As a result businesses are starting a more open engagement with clients and consumers. The UNEP Report Cards initiative points in this direction. It may open up opportunities for a collective effort in dealing with the uncertainties of our risk-filled future.”

*Jan-Gustav Strandenaes,
Senior Policy Advisor, Northern Alliance
for Sustainability – ANPED*

While most of the Report Cards do not address company-level information, they do provide some information on company use of management standards. Some sectors, such as consulting engineering, have developed their own management standards to help companies integrate environmental, social and economic issues into decision-making. Others, such as the finance sector, have developed tools that encourage companies seeking financing to take an integrated approach. More generally, a number of sectors refer to the use of the ISO 14001 EMS standard.

Standards such as the ISO 9000 on quality management systems, ISO 14001 on EMS and OHS 18000 on occupational health and safety, have signalled the formalisation of issues-based management into organisational behaviour. There are currently 90,000 certifications worldwide to ISO 14001, implying that a significant number of companies have integrated environmental issues into their decision-making structures. Ongoing development of the ISO 26000 guidance standard on social responsibility may provide a tool to help more companies take an integrated approach to economic, social and environmental issues.

As discussed in Section C (Reporting) above, however, the trend towards the production of integrated sustainability reports is perhaps the best proxy indicator available for the integration at the company level of environmental, social and economic issues. As mentioned above, though, this trend is not apparent from the information provided in most of the Report Cards.

ii. Future challenges

Mirroring the priorities outlined in “Work in progress,” industry groups see climate change as a common long-term issue. It is both one of the most important drivers for new opportunities (e.g. the renewables sector), and one of the biggest challenges that many sectors now face (e.g. automotive, coal, oil and gas, and road transport). Because of the increasingly strong link between energy use, emissions and energy costs, companies are taking a more holistic approach to managing the environmental and economic impacts of their energy-use decisions.

As mentioned in Section A (Mainstreaming), this could be helped by a broader use of management tools, such as design for the environment and life cycle assessment. The finance sector could also have a stronger role to play, including by continuing the work it has done on assessing the economic costs and business risks posed by climate change, by integrating this into valuation models and financing requirements, and by providing financing for renewable energy technologies. Recent legal opinion with respect to the fiduciary duties of certain categories of fund managers to take into account environmental, social and governance issues could also have a significant impact in the mainstreaming process.

Given the consistency of data that show that current rates of material use cannot be sustained, it was surprising that so few of the Report Cards confronted the issue of resource limits. Little attention was given to the actual or theoretical limits of either non-renewable or renewable resources, where current levels of use exceed exploration and/or replenishment. A

notable exception is the forest and paper sector, which underlined the importance of plantations, recycling and combating illegal logging.

E. Recommendation 5: Global responsibilities and opportunities

What UNEP said in 2002: Help build the global framework of rules, established practices and institutions needed to protect the global commons and to develop the new responsibilities that lead to new global opportunities.

i. Work in progress

As noted above, the period following the WSSD in 2002 witnessed a continuing expansion in the range of environmental and social responsibility initiatives taken by the business sector and others aimed at developing principles, norms or standards or promoting partnerships to advance sustainable development.

The emergence and growth in number of voluntary standards, many of which set strict rules that go beyond existing legal requirements, have blurred the line between formal and informal global rule-making in a number of ways. First, many of the voluntary standards are designed to complement or act as implementation tools for policy objectives outlined in inter-governmental agreements or commitments. Second, many voluntary standards are developed with the active participation and, in some cases, financial support of governments. Third, the use of voluntary standards in supply chains—while not mandatory—can result in them being commercial imperatives. Finally, voluntary standards can be easily integrated into government policies and therefore can evolve into more formal rules-based instruments.

For the purposes of this report, and noting that Section C addressed voluntary initiatives, this section addresses only those global frameworks of rules, practices and institutions that are housed in governmental organisations and that lead directly to new government policy. In addition, the term “global responsibilities and opportunities” directly raises the need for improved engagement of business and industry from developing countries.

References to participation in, for example, the UN Framework Convention on Climate Change (UNFCCC), the Intergovernmental Panel on Climate Change (IPCC) or other energy-related discussions at the IEA or OPEC are the most frequently made, including by the aluminium, railways, road transport and fertilizer

sectors. Other international initiatives that are mentioned include UNCTAD (e.g. the accounting and mining sectors), SAICM (e.g. the chemicals and mining sectors, see more below) and the MDGs (e.g. the advertising, finance and consulting engineering sectors). No mention was made of some of the main multilateral environmental agreements or co-operation with relevant UN agencies in the fields of labour, human rights and health. The exception is the organised labour Report Card, which makes an important contribution in calling for joint action involving UNEP, the ILO and the WHO. Considering the global representation of the unions involved, this could present a real opportunity in meeting global responsibilities and opportunities.

The most recent example of industry groups' contribution to global rule-making is the Strategic Approach to International Chemicals Management (SAICM) initiative. UNEP initiated SAICM on the basis of a mandate from the WSSD. It is an innovative example of how governments can involve business and other stakeholders in the development of an international policy framework that complements existing international chemicals conventions. Discussions commenced in 2003 and culminated in an international conference held in Dubai in February 2006. SAICM provides a policy framework for international activities aimed at achieving by 2020 the WSSD goal related to safe chemicals production and use.

ii. Future challenges

One of the key challenges facing international rule-making, institutions and policy-development is the relative lack of information on the effectiveness of voluntary initiatives in complementing formal governmental policy and rule-making. This issue is linked with emerging discussions on the potential impact and scope of corporate responsibility initiatives, which must ultimately be supported by a clear business case. For example, can illegal logging be addressed through voluntary instruments, and is the business case for avoiding illegal logging strongly enough supported by market forces in the absence of complementary public policy?

The growth in transnational voluntary initiatives also raises the question of their linkage with formal intergovernmental frameworks. Part of the challenge is to understand how companies can support the implementation and consistent application of basic principles and norms in all parts of the world. For example, the debate on business and human rights norms has been very topical in the last four years, highlighted by the appointment in 2005 by the UN Secretary-General of a Special Representative on the issue of human rights and transnational corporations and other business enterprises.¹⁵

Another challenge in meeting global responsibilities is the relatively weak representation in international industry groups of companies from developing countries. While there are a number of legacy and logistical explanations for this, the OECD focus of many international industry groups limits the degree to which they can represent and shape the opinions of companies in the developing world. For equally understandable reasons, but with a similar effect on the scope of international industry groups' impact, their membership often consists of limited numbers of SMEs.

Overall, it is noteworthy that very few sectors call for government intervention in the form of policies or regulations. Where sectors do call for government action it generally falls under one of the following categories:

- a) provide financing, including subsidies (e.g. the LPG sector);
- b) eliminate subsidies or promote cost internalisation in order to level the playing field with competitors (e.g. the railways sector); or
- c) creating market demand through public procurement or other policies (e.g. the renewables sector).

There were very few calls for new regulations, although several sectors referred to existing regulations in a positive light (including REACH, the EU Energy Efficiency of Buildings Directive and the Montreal Protocol). Also, while there is a general recognition of governments' role in shaping or creating the business case, there is surprisingly little comprehensive assessment or recommendations on specific areas where government intervention is, or is not, needed to compensate for cost internalisation in sectors where global competitors may not be facing similar pressures.

4. Advancing progress: issues to address and follow-up actions

The 30 industry sector Report Cards that follow provide an outline of an impressive range of initiatives and activities through which industry is addressing the challenge of sustainable development in general, and the challenges of sustainable consumption and production in particular. However, the Report Cards also serve as a sober reminder that a number of gaps remain between the magnitude of the challenge and the impact of the response to date.

¹⁵ *The Interim Report of Special Representative John Ruggie was released on 22 February 2006, E/CN.4/2006/97*

As mentioned in the consulting engineering Report Card: “Most of the structures, processes, systems, and technologies needed to achieve sustainability have not yet been invented.” The report goes on to note that:

“Without unprecedented multinational agreements and huge investments, it is likely that progress toward sustainability will advance incrementally, dependent upon the practitioners’ ability to invent, test and apply new, more sustainable designs and technologies on individual projects, and upon project owners’ aspirations, objectives and resources.”

Before presenting some more general conclusions on the information provided in the Report Cards, it is instructive to consider the types of information that were quite often not provided. While it is clear that it is difficult to include a comprehensive list of information on a subject as complex as sustainable development in a single three-page sector Report Card, there have nonetheless been some **notable gaps in the information provided. These include:**

Measurable performance targets: Only just over half of the Report Cards provide any empirical information on performance. Some only provide a Web link for performance data. Part of the complication here is the ongoing challenge of collecting and aggregating data at an international level when different units and definitions are used at the national level. But in general, there is a broad absence of specific, quantifiable performance targets in the sector Report Cards. Notable exceptions, however, are the aluminium sector (which has a framework for obtaining information on and reporting against 12 indicators); the refrigeration sector (which has stated, for example, that energy efficiency can be improved by 30–50 per cent by 2020); the forest and paper sector (for example, the paper industry in the U.S. is seeking a recovery rate of 55 per cent of consumed paper by 2012); and the cement sector (national level CO₂ reduction targets in the U.S. and Europe).

On the whole, the targets that have been set at the sector level are general in nature and most often refer to initiatives (e.g. reporting, research, development of best practice guides or technology transfer) or, in some cases, a single specific issue (e.g. climate change). That said, in other cases the focus is on setting appropriate company-level targets, which can then be reported in aggregate at the sector level. In these cases the sector is often not setting targets itself, just prioritising issues.

Business as usual: No sector suggested that achieving more sustainable development requires a reduction in supply of their products or services.

While there were some calls for more consistent and integrated assessment of the life cycle impacts to assess preferability between substitutes in different circumstances, this was not a common theme. Integrated and life cycle approaches would also imply taking stock across different sectors. This implies for example that analysis of the impact of aluminium production need to consider how a government subsidy for aluminium also translates into an indirect subsidy of other sectors such as airlines and automotive manufacturing. The question then becomes whether moving beyond business as usual and diversification into new products and service areas require cross-sectoral, public forums for deliberation and/or regulation to bring about systemic change.

Related to this issue is the fact that very few sectors made reference to the “rebound effect,” that is the danger that economic growth—particularly, but not exclusively, in developing countries—twinned with the reduction in prices for many products and services, would outpace the gradual shift towards more sustainable practices. More specifically, only three Report Cards referred to economic growth and increased demand in China, and only one Report Card mentioned India.

Partnerships: although almost all of the Report Cards mentioned specific examples of existing partnerships, very few contained explicit invitations to enter into new partnerships. For the most part, this was the least informative of the three key Report Card sections, and suggests that the partnership approach might not be as amenable to sector-wide initiatives as it is to company-specific activities. It may also be that sectoral organisations prefer to present partnership invitations in more confidential or bilateral discussions.

A number of industry groups highlighted partnerships that seek to further promote mainstreaming. This includes initiatives to provide awareness raising and training (e.g. the mining and accounting sectors); to develop, refine or promote sector-specific management tools (e.g. the consulting engineering, chemicals and waste management sectors); and the establishment of enabling frameworks (e.g. the fertilizer sector’s Year for Africa).

Many of the Report Cards recognise the value of partnership-based approaches to the development and use of voluntary instruments, and related thinking about sustainability challenges. While the consulting engineering sector invites partnerships to help develop a code of conduct, most of the other partnership invitations are focussed on adapting voluntary initiatives to make them more suitable to developing countries or, more generally, to expand their implementation. Notably, none of the Report Cards addresses SMEs directly in this context.

Developing countries: While some Report Cards—such as that of the aluminium sector—cover data from all regions, many include information derived almost exclusively from OECD-based companies or initiatives. Despite the fact that over two thirds of them appear to have global mandates, information on business and industry activity in developing countries is often limited. This is likely a function of the composition and historical membership in sector associations, which tend to include large, OECD-based multinationals. However, the need to increase developing country engagement was highlighted in the 2002 process and there appears to have been little success in addressing this.

For the most part, sector Report Cards that do address developing countries do so in the context of either initiatives to share best practice or best-available technology, or examples of OECD-based multinationals with operations in developing countries.

Small and medium-sized enterprises (SMEs): Other than indirectly in the context of supply or value chains, no sector report specifically addressed the issue of how to encourage SMEs to address sustainable development. Considering that the vast majority of enterprises are SMEs, which also provide the greatest number of jobs, this is something that needs to be addressed. This is particularly important considering the urgency of bringing across the business case to SME owners and managers. In a 2004 survey by UNIDO of SMEs participating in the UN Global Compact, only 29 per cent connected joining the initiative with their business and 38 per cent saw their membership as an expression of humanitarian concern.¹⁶

The growth in number of SMEs, for example in the manufacturing sectors over the last 15 years, has led to diffuse industrialisation in many countries. The key role of SMEs is beyond question. At the same time it should be noted that many of the industrial processes at stake in the Report Cards require economies of scale that are not conducive to extensive SME activity in the relevant sectors. Considering this, the Report Card initiative with its focus on international industry groups is not the ideal mechanism for comprehensive coverage of SMEs.

Consumer awareness: Other than the advertising industry (which made a plea for government funding for sustainable consumption awareness campaigns) and the detergents sector (whose Washright campaign was aimed at promoting the sustainable consumption of laundry detergents), no sector report addressed consumer awareness issues directly. These issues can also be addressed through self-regulatory initiatives by industry groups. An example is the guidelines on advertising and sustainable development published in 2003 by the French *Bureau de*

Vérification de la Publicité in response to activities of the UNEP Advertising and Communication Forum.

Moreover, the reported updates lack information on activities to enable and encourage consumers to make informed choices through, for instance, the use of product declarations, labels and providing options, for example, to buy “green” electricity. Having said this, it has to be noted that a number of the industry groups represented operate in the business-to-business (B2B) marketplace, and therefore do not necessarily deal directly with the end-consumer.

MDGs and poverty reduction: While a number of sector reports referred generally to the MDGs, only a few recognised them explicitly as a framework for prioritising activities or investments. Much more attention is given to the WSSD process and its predecessor, Agenda 21. One of the consequences of this, perhaps, is that very few sectors addressed poverty reduction, except indirectly through information on trends in employment.

Having noted several gaps in the information, and taking the Report Cards and global trends as a whole, ***the following broad conclusions can be drawn:***

Rate of progress not fast enough

Although the Report Cards do not provide the data needed to draw firm conclusions on the overall improvement in resource use and internalisation of externalities, it seems evident that progress towards sustainable development is still not moving fast enough. When reviewing the Report Cards against global ecosystem and social trends, it is hard to avoid repeating the conclusion reached by UNEP in the 2002 process that there continues to be “*a growing gap between the efforts of business and industry to reduce their impact on the environment and the worsening state of the planet.*”

As noted in the latest UNEP Global Environmental Outlook (GEO) Year Book:

“Approximately 60 per cent of the ecosystem services examined in the MA (Millennium Ecosystem Assessment) were found to be degraded or used unsustainably. In particular, at least 25 per cent of commercially important fish stocks are over-harvested, and up to 25 per cent of global fresh water use exceeds long-term accessible supplies.”¹⁷

¹⁶ UNIDO/UN Global Compact. Survey of Small and Medium-sized Enterprises in the Global Compact. Vienna/New York, 2004.

¹⁷ <http://www.unep.org/geo/yearbook/yb2006/011.asp>

¹⁸ See WMO press release No.744 of 14 March 2006.

To take a specific example: while there is no question that there has been a large increase in the number and scope of industry initiatives to address climate change, including initiatives to improve awareness, measure emissions and introduce cleaner technologies, the rate of progress is not fast enough. The World Meteorological Organization (WMO) recently announced that global concentrations of greenhouse gases in the atmosphere had reached their “highest ever-recorded levels” in 2004, and showed “no signs of levelling off.”¹⁸ To speed up progress in addressing issues of this scope and urgency will require collective effort by all, including voluntary action by business and other stakeholder organisations within enabling regulatory frameworks.

Doing business differently: the life cycle economy

As we examine the state of “Industrial Development” at CSD-14 and CSD-15, the question is whether the updates from a wide range of industries show early signs of bringing about the fundamental changes required in the way we conduct business. Technological developments and global changes over the last 15 years have brought about significant transformations in the composition of some industry sectors. Amidst both diversification and convergence between some sub-sectors, we have seen examples of oil and gas companies seeking to transform themselves into energy companies and telecoms companies turning themselves into communications companies. What we do see in the Report Cards are examples of traditional industries targeting new business opportunities in recycling and improved resource efficiency, among others. We also see the emergence of new and ambitious sub-sectors in environmental goods and services.

The Report Cards are a powerful reminder of the huge potential of industry to contribute to a new model of industrial development. Industry has a central role to play, whether in terms of helping build consumer awareness of the issue, generating the necessary finance and investment, developing the necessary environmentally sound and socially acceptable technologies, products and services, or providing jobs, mobility, innovation and economic growth. However, it is unrealistic to think that company action alone can solve all the sustainability issues of this world.

It would be prudent to begin to assess whether voluntary initiatives can, on their own, make as significant or sufficient a contribution to sustainable development as widely hoped. That said, the question remains open as to whether industry groups are doing enough to contribute to the development and imple-

mentation of the policy framework needed to move towards sustainable development at a rate that corresponds to the demands of either the Johannesburg Plan of Implementation, the Millennium Development Goals or, for example, the importance of holding atmospheric concentrations of greenhouse gases below a certain level.

While there are many examples of practices and technologies that are playing a major contribution to increased efficiency of materials use, many industry sectors appear to remain largely in a “business as usual” mode, selling products and services without full consideration of their social and environmental impacts. And as various business and industry organisations take on corporate environmental and social responsibility issues, it remains to be seen how well they will cope with systematic stakeholder engagement in seeking solutions that cannot be found by purely technological means.

“Opening up” relates to not only stakeholders but also fellow industries. The type of change required more often than not will require improved cross-sectoral planning and collaboration. A number of the Report Cards refer to the inherent or relative preferability of one sector’s products or services over substitutes from competing sectors. Indeed, there is a stronger sense of cross-sectoral competition than there is of co-operation. In many cases where cross-sectoral co-operation is discussed it either involves:

- a) a professional services sector advising clients in other sectors (e.g. advertising, finance, consulting engineering); or
- b) a sector working with downstream clients (or potential clients) to identify more or better uses for their product (e.g. coal, aluminium).

One instance where a sector has called for more co-operation with competitors is transport, with the rail transport sector calling for the use of life cycle assessment considerations in assessing sustainable mobility options. The sector organisation also calls on UNEP to convene with partner organisations a cross-sectoral, international forum on sustainable transport systems.

The dialogue process needs to be improved

The industry Report Cards provide a highly readable and almost unique snapshot of sector-by-sector progress towards sustainable development. The time and effort that industry groups have put into this exercise is valuable for all parties. Nonetheless, it is important to note that the reporting process is a means to an end. The ultimate objective is to catalyse and sup-

port industry efforts to promote sustainable consumption and production, as well as corporate environmental and social responsibility. With this goes the identification of new co-operation opportunities in taking action. The usefulness of sector-based reporting on progress, challenges and partnership opportunities must therefore be judged in the context of this goal.

It is clear that a three-page Report Card is not enough to provide a comprehensive overview of all of the initiatives undertaken by industry groups or their members. Furthermore, as was evident from the 2002 Sector Reports process, the compilation of a comprehensive list of initiatives and activities is an extremely time- and resource-intensive exercise. As a result, any conclusions drawn on the basis of this data must be carefully qualified to reflect the fact that these Report Cards do not represent the universe of activities being undertaken by industry groups and individual companies. One of the next steps in any follow-up process must therefore be to consider carefully the contribution that improved reporting on a sector-basis can make. This includes examination of the appropriateness of sector-based reporting within a uniform structure applied to a diverse range of industry sectors.

The last 30 years of interaction between UNEP and industry groups has confirmed that the convening and co-ordination role of sector-based industry groups can be a powerful force for sustainable development. Based on the experience gained in UNEP's *Industry as a Partner for Sustainable Development* dialogue process, several preliminary suggestions can be made on how to further improve the role of sector-based business and industry organisations. These suggestions will be considered in developing UNEP's work programmes, and could be considered by industry groups, other stakeholders, relevant UN agencies and the CSD Secretariat (UNDESA) in taking the process further.

How to advance progress

Based on UNEP's experience of the 2005–2006 Report Card process, ***the following issues warrant further consideration by industry groups, public institutions and civil society stakeholders:***

A. Building capacity to share and implement best-practices

The challenge of sustainable development is one that requires a global response. The business sector of industrialising nations is playing an increasingly important role in world trade, and is also having an increasingly important impact on environmental and social conditions.

Innovation and development of new business practices, technologies and production processes will always be an important component of industry's contribution to sustainable development. At the same time, a significant amount could also be achieved if more companies implemented the best-practices and used the technology and guidance that is already available. While it would be an over-simplification to claim that the gap exists only between developed and developing countries, or between multinational enterprises (MNEs) and SMEs, it is nonetheless true that these gaps exist and are significant.

A follow-up process could consider how industry, government, labour and other civil society stakeholders can best work with sector-based industry groups to build their capacity to share information on, and to provide support for, the implementation of best-practices in developing countries and by SMEs. Possible options could include a "twinning system" for providing support to business and industry organisations from industrialising regions through staff exchanges, training and sponsoring participation in international forums. Given the growing participation of developing country companies in the UN Global Compact, this could be one network to pursue this aim. Another could be the UNEP/UNIDO network of cleaner production centres and their business and industry networks in developing countries. This network has as an explicit aim to build capacity in developing and transition economies.

B. Setting common priorities and action plans

The nature of certain sustainable development challenges is such that, in the absence of co-ordinated action, the efforts of a few companies will have little real impact on resolving the problem. As a result, if companies co-ordinate their activities and work together to address common problems the net impact may be substantially greater. What is unclear, however, is the extent to which the marketplace encourages or discourages co-operation between what are, in effect, competitors.

Many sector-based industry groups already set common priorities and develop joint action plans on key issues. It would be worthwhile to consider whether this practice could be improved, including by linking them with international priorities, such as the goals of the Johannesburg Plan of Implementation or those set within multilateral environmental agreements (MEAs) and other international conventions such as those of the ILO. It would also be valuable to consider how capacity could be built in other sector-based industry groups to set common priorities and to develop joint action plans.

C. Co-operation and integration between sectors

No company exists in isolation from other companies, including from companies in other sectors. Be it through supply-chain relationships, shared technology or common standards, companies interact with other sectors every day. The example above, where sectors can share learning on setting common priorities and action plans, is only one example of how sectors can benefit from each other's experience. It would be useful to consider how more intra-sectoral co-operation could help facilitate the transmission of experience and learning.

On the other hand, certain environmental, social and economic challenges can only be resolved through cross-sectoral co-operation. For instance, the promotion of sustainable mobility will require co-operation between road transport, railways, public (urban) transport, aviation and shipping. It will also require co-operation between public transport bodies and private suppliers. Indeed, many of the potential revolutions in de-materialisation and shifts to Product Service Systems (PSS) can only be achieved through convergence in planning and more cross-sectoral co-operation.

D. Identifying how other stakeholders can help to build the business case

The business case for sustainable development is not static: it changes in response to, among other things, changing regulations and public policies, consumer preferences, NGO expectations, labour priorities and supply chain requirements. Maximising the effectiveness of voluntary measures to promote sustainable development requires a maximisation of the business case.

It could be worthwhile to analyse in greater detail the components that determine the scope of the business case, and to enter into partnerships with other stakeholders to seek to maximise it. In particular, it would be useful to consider how governments can exert their impact on the market in a way that is more supportive of sustainable consumption and production, for example through the use of public procurement policies.

The WSSD agenda will succeed only if there is a continued willingness among business and industry, including labour, as well as other stakeholder organisations, to undertake joint partnerships to speed up implementation of key sustainable development goals. Progress in the development of framework agreements between large corporations and Global Union Federations, as highlighted in the organised labour Report Card, is one innovative example in building partnership co-operation to address not only

labour but also broader sustainable development issues. The willingness of unions to introduce environmental—along with health and safety—principles in these agreements shows greater awareness of the business case at the workplace level. Progress at this level forms an essential part of advancing corporate environmental and social responsibility.

Industry as a Partner for Sustainable Development: issues to address and actions to follow up

UNEP's aim with the *Industry as a Partner for Sustainable Development* process is not reporting for the sake of reporting. Just as a company manager knows that reporting has to be an inherent part of business operations, UNEP's interest is in the meaning of the activities that are being communicated or reported. This also raises the question of what can be done to improve the value of the process and to identify areas where partners can work with UNEP, UNIDO, UNDP and other UN organisations in partnerships and voluntary initiatives to advance sustainable development.

As this overview shows, a number of core themes and issues emerge from the Report Cards. For example, there is the tendency to focus more on environmental issues, a natural response perhaps in a process facilitated by UNEP. The trend towards the creation of collective policy declarations, charters or codes, and the introduction of new management tools, including the use of reporting systems with agreed performance indicators, are also noteworthy.

Many membership-based industry groups have broad mandates and limited resources. As a result, there will always be a need for certain amount of prioritisation. However, given the experience encompassed in the 2002 Sector Reports process, and again in this follow-up Report Card initiative, it is worth considering whether we are reaching a point where we understand generally what can and cannot be achieved efficiently through collective action at the sector-level. As important, it is likely that experience to date across a range of sectors can help us understand what is needed to increase the impact of collective initiatives.

Against this background, industry groups could consider drafting a matrix that lists types of actions and key issues they can take up—at the collective level and at the company level—to accelerate progress in the advancement of sustainable consumption and production, as well as corporate environmental and social responsibility.

Such a matrix could be made up of at least two different types of information along its horizontal and

vertical axes respectively. First, it could list different types of collective activities or initiatives, such as:

- campaigning, lobbying;
- awareness-raising;
- capacity-building, training, material development;
- development or promotion of codes and standards;
- multi-stakeholder engagement;
- twinning partnerships;
- demonstration events; and
- pilot projects.

The second type of information that can be listed is the different thematic issues or sustainability objectives that could be addressed through the collective activities or initiatives, addressing for example:

- sustainable consumption and production;
- corporate environmental and social responsibility;
- developing and transition economy involvement;
- small and medium-sized enterprises;
- public-private co-operation;
- climate change;
- biodiversity; and
- poverty alleviation.

The information in such a matrix could become an internal “checklist” or tool to help industry groups identify priorities and develop and implement sustainability work plans to achieve them. It could also help industry groups to communicate their activities to other stakeholders, including those who may be able to engage in partnership opportunities.

It is evident that industry bodies have a large but still not fully realised potential to help advance efforts towards sustainable development. Their broad-based membership and experience position them ideally to expand their efforts. As suggested earlier in this overview, some of the practical actions and sub-topics that could be addressed through industry groups include:

- developing a service-based (rather than product-based) approach, thereby offering scope for greater materials and energy efficiency;
- encouraging cross-sectoral co-operation on policies and technology (e.g. on transportation), thereby promoting more coherent and consumer-friendly services;
- setting more challenging sectoral objectives and targets (e.g. on GHG emission reductions and reporting);
- mainstreaming and spreading of “best practices,” including to developing countries, thereby ensuring that the benefits of new technologies and business approaches are shared for leap-frog impact in emerging economies;
- engaging with SMEs, including through responsible and partnership-based supply chain management; and
- building “policy coalitions” with civil society organisations on regulatory and other reforms that may be necessary to achieve further improvements in performance.

However, it would be wrong to presume that industry groups have an unlimited supply of financial or human resources to address these issues. In some areas, the progress that can be achieved through industry-driven initiatives will rely on partnerships. The challenge for other stakeholders is to consider the conditions under which industry group activities should be supported through partnership arrangements or, in the case of governments, through financial or policy support. This will in many cases involve priority-setting within civil society and government agencies.

While the industry groups could consider developing a matrix to guide their priorities and develop sustainability work plans, other stakeholders could identify issues and initiatives that would be more effectively addressed through partnerships with industry, including industry groups. In the case of governments, it might be worthwhile considering the conditions under which funding or policy support might be provided to these partnerships.

The CSD will conclude its discussions on Industrial Development at its fifteenth session in 2007. That session will focus on measures to speed up implementation, mobilise action to overcome obstacles and constraints, and build on lessons learned. In October 2006, UNEP will again convene its annual UNEP Consultative Meeting on Business and

Industry in Paris. UNEP invites industry groups to develop a matrix outlining initiatives and issues that can be addressed through collective action, and to come to the Paris meeting to discuss the feasibility of their sustainability work plans. UNEP also invites other stakeholders to develop their own proposals along these lines, indicating how and under what conditions they could work more closely with industry groups to achieve common sustainable development objectives.

Based on multi-stakeholder discussions at the Consultative Meeting on Business and Industry, UNEP, industry groups and stakeholders could also develop a submission to CSD-15 on follow-up actions and suggested policy recommendations. This can provide an opportunity to advance policy recommendations and partnership activities to accelerate progress towards sustainable development, based on a new model of industrial development.

EXTRACTIVES

The Report Cards in this chapter have been prepared by the respective business and industry groups, who assume full responsibility for the contents thereof.



REPORT CARD: Coal

Introduction

In 2002, the World Coal Institute took part in the UNEP Industry as a Partner for Sustainable Development Initiative, providing an overview of the coal industry's efforts to address sustainable development issues. This Report Card aims to demonstrate how the goals and principles set out in that initial review have been implemented in the intervening four years.

It should be noted that the World Coal Institute (WCI) is a member of the International Council of Mining and Metals and encourages the coal industry to follow the best practice guidance issued by the ICMM on various sustainable development issues. (See also the separate report on mining in this publication.)

The coal industry is growing, particularly in developing economies. Production in non-OECD countries, for example, has expanded by over 40 per cent, from 2,200 million tonnes in 2000 to over 3,000 million tonnes in 2004. Although the bulk of coal production is for domestic markets, international coal trade earns developing countries around \$7 billion per annum in export revenues. Worldwide, the industry employs some seven million people, 90 per cent of them in the developing world.

Work in progress

What we said in 2002: reducing environmental footprint from production and use of coal, minimising production impacts on the biosphere and local communities; accelerated technology improvement and transfer to reduce emissions; promoting industry sustainability principles through regional stakeholder workshops...

The sector's initial report in 2002 identified a number of items of work in progress. These included: reducing the environmental footprint along the coal chain; minimising the impacts of production on local communities; and promoting the principles of sustainable development within the industry. The coal

industry has collated a number of case studies that demonstrate its actions for sustainable development. Some are referred to here, but full details of these and others may be obtained from the World Coal Institute (<http://www.worldcoal.org/pages/content/index.asp?PageID=235>) and the International Energy Agency's Coal Industry Advisory Board (<http://www.iea.org/ciab/pubs.asp>).

Reducing the environmental impact throughout the coal chain has been a particular focus of companies active in developed and developing countries alike. Clean coal technologies reduce impacts along the coal chain, and details are given in the next section and the accompanying table. More rigorous reporting of environmental indicators has enabled successful programmes at mining operations, such as the introduction of biodiversity programmes (e.g. Mount Owen Biodiversity Offset Strategy, Australia; Biodiversity Action Plans, U.K.); reductions of emissions to air and water (e.g. Management of the Oliphants River Catchment Area, South Africa); and the introduction of company-wide CO₂ reduction targets (e.g. Rio Tinto, AngloAmerican).

Minimising the impacts on local communities is a key issue for the coal industry—stakeholder consultations are standard in many new and ongoing operations, ranging from formal strategic consultations with national environmental groups to broad community consultation on site-specific issues. Community liaison teams ensure that the rights and beliefs of the local people are heard and considered. Mine closure plans (e.g. Rietspruit, South Africa) ensure the continued well-being of communities after mining operations have ceased, and comprehensive development plans are derived through stakeholder teams to provide future opportunities. Individual schemes have been adopted on issues such as health and education—for example, Anglo Coal's innovative HIV/AIDS programme in South Africa, which provides healthcare, support, continued employment and medication for employees with the condition. The education and support programmes provided by this scheme (and others) enable women to strengthen their role in the community, providing enhanced gender equality. Coal companies routinely provide funding in the developing countries where they operate for local schools, clinics and small business development initiatives.

Accelerated technology development and transfer. The rapid uptake of cleaner coal technologies in some regions is notable, e.g. supercritical power plants in China (see next section), and the coal industry continues to work with governments, power generators and equipment manufacturers to promote new technologies.

The promotion of sustainable development principles has taken place within individual companies through internal training programmes, but also under the auspices of the World Coal Institute, which has run a series of international workshops since 2002, addressing different aspects of sustainable development in Indonesia, the U.S., Germany and China.

Future challenges

What we said in 2002: furthering development and deployment of cleaner coal and carbon capture and sequestration technologies worldwide; improving SHE reporting standard/rate/understanding; better understanding of sustainable development principles within the industry and among local communities...

In 2002 the WCI identified a number of key challenges for the future, including furthering the development and deployment of cleaner coal and carbon capture and sequestration technologies worldwide; improving standards for, and the practice of, SHE reporting; and promoting a better understanding of sustainable development principles within the industry and among local communities.

Furthering the development and deployment of cleaner coal technologies: Local, regional and global emissions result from the use of coal, and clean coal technologies have been developed that can address many of these concerns (see table). The rate of deployment of such technologies is improving, but barriers remain—particularly with regard to financing mechanisms. The industry is working with governments and international financial intermediaries to identify barriers and formulate solutions.

In China, over 100 new high-efficiency supercritical power plant units have been ordered by power generators, compared to only two units installed by the early 1990s. Efficiencies of these new plants are expected to be upwards of 45 per cent, compared to 28 per cent in conventional Chinese plants. These efficiency improvements will lead to greatly reduced emissions per unit of power produced. Other advanced coal technologies, such as integrated gasification combined cycle (IGCC), can make even

bigger gains, with efficiencies up to 55 per cent expected within the next 10 years. New IGCC plants are planned for China and India.

Carbon capture and storage (CCS), particularly when combined with advanced gasification of coal, holds the prospect of a “zero emissions” future. The Futuregen project from the U.S., co-funded by the coal industry, aims to demonstrate this zero emissions technology by 2010. Since 2002 the coal industry has worked on a number of levels, both nationally and internationally—funding research, participating in collaborative projects and disseminating information—on carbon capture and storage. Other examples include industry stakeholder participation in the Carbon Sequestration Leadership Forum, and European Technology Platform on Zero Emission Power Plants. The coal industry is actively striving to collaborate in international efforts to demonstrate CCS via a number of small to medium scale projects around the world.

Improving Health, Safety and Environment Reporting: In the late 1990s, health, safety and environment (HSE) reporting formed a small part of the company annual report. Since then, many companies have progressed to a separate health, safety and environment report, some then on to a health, safety, environment and community report, and a few leading companies have moved forward to comprehensive sustainable development reports which follow the Global Reporting Initiative (GRI) guidelines. Of the 16 WCI member companies, six now base their reports on the GRI standard. Nine WCI member companies also follow ISO 14001 (Environmental Management) for their individual operations in both developed and developing countries, with other members implementing individual EMS. Further work is needed to encourage company reporting and the use of environmental management systems, particularly by SMEs.

This increased awareness and reporting at the corporate level has been mirrored by a greater level of training and awareness-raising amongst employees and the wider community. In many cases initial training is backed up by ongoing information dissemination—such as refresher courses, company newsletters and intranet features. At present, many companies limit formal sustainable development training to management, but expect key messages and principles to be communicated to staff.

Improving the health and safety performance of coal companies in developing countries was one of the key tasks identified in the 2001 report. WCI member companies with operations in developing countries are addressing the task by enforcing higher internal standards of health and safety at their operations than local regulations require. This not only

ensures a good safety performance at these operations, but can disseminate best practice through the sector—particularly where local contractors are employed. Safety performance in China is of particular concern, with the number of accidents and total deaths remaining unacceptably high. The international industry is involved through country-to-country dialogue and safety training programmes to encourage safety awareness.

Partnership opportunities

The sector is interested in developing partnerships concerning:

- public awareness/acceptance of carbon capture and storage—partnership with energy sector, governments, NGOs to assist in improving the public awareness and understanding of the role of carbon capture and storage in addressing global climate change concerns; and

- mine safety—partnership with international bodies to improve understanding and to identify ongoing actions/international technical assistance to avoid areas of duplication or overlap.

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Annex

Environmental Challenges	Technological Responses	Status
Particulate Emissions		
Such as ash from coal combustion. Particulates can affect people's respiratory systems, impact local visibility and cause dust problems.	Electrostatic precipitators and fabric filters control particulate emissions from coal-fired power stations. Both have removal efficiencies of over 99.5 per cent.	Technology developed and widely applied both in developed and developing countries.
Trace Elements		
Trace element emissions from coal-fired power stations include mercury, selenium and arsenic. They can be harmful to the environment and to human health.	Particulate control devices, fluidised bed combustion, activated carbon injection and desulphurisation equipment can all significantly reduce trace element emissions.	Technologies developed, commercialised and widely applied in developed countries. The application of NO _x control and desulphurisation techniques is less prevalent in developing countries and, although increasing, could be more widely deployed.
NO_x		
Oxides of nitrogen, referred to collectively as NO _x , are formed from the combustion process where air is used and/or where nitrogen is present in the fuel. They can contribute to smog, ground level ozone, acid rain and greenhouse gas emissions.	NO _x emissions can be cut by the use of low NO _x burners, advanced combustion technologies and techniques such as selective catalytic reduction and selective non-catalytic reduction, which lower emissions by treating the NO _x in the flue gas. Over 90 per cent of NO _x emissions can be removed using existing technologies.	

Environmental Challenges	Technological Responses	Status
SO_x		
Oxides of sulphur (SO _x), mainly sulphur dioxide (SO ₂), are produced from the combustion of the sulphur contained in many coals. SO _x emissions can lead to acid rain and acidic aerosols (extremely fine air-borne particles).	Technologies are available to minimise SO _x emissions, such as flue gas desulphurisation and advanced combustion technologies. Emissions can be reduced by over 90 per cent and in some instances by over 95 per cent.	
Waste from Coal Combustion		
Waste consists primarily of incombustible mineral matter (with a small amount of unreacted carbon).	Waste can be minimised both prior to and during coal combustion. Coal cleaning prior to combustion is a very cost-effective method of providing high quality coal; it reduces power station waste and emissions of SO _x , as well as increasing thermal efficiencies. Waste can also be minimised through the use of high efficiency coal combustion technologies—the residual waste can then be reprocessed into construction materials.	Technologies developed and continually improving. Awareness of opportunities for the re-use of power station waste (e.g. fly ash in cement making) is steadily increasing.
Carbon Dioxide (CO₂) Reduction		
Carbon dioxide is the main oxide of carbon produced when fuels containing carbon are burnt. Carbon dioxide is a significant greenhouse gas; progressively reducing CO ₂ from fossil fuel-based power is an essential element of a global response to the risks of global warming and climate change.	In the short to medium term, substantial reductions in the greenhouse intensity of coal-fired generation (CO ₂ per megawatt hour of electricity produced) can be achieved by increased combustion efficiency (megawatt hours per tonne of coal consumed).	The efficiency of pulverised coal generation increased substantially during the latter part of the 20th century and, with the development of supercritical and ultrasupercritical processes, will continue its steady upward advance over the next two decades. Circulating fluidised bed combustion technology offers similar benefits to advanced pulverised coal combustion and is well suited to co-combustion of coal with biomass.
CO₂ Elimination		
The virtual elimination of CO ₂ emissions from fossil fuel-based power—including coal-fired generation—offers the prospect of reconciling growing energy demand with the long-term global goal of stabilising the concentration of greenhouse gases in the atmosphere at an acceptable level.	Zero-emissions technologies (ZET) to enable the separation and capture of CO ₂ from coal-based generation and its permanent storage in the geological subsurface.	CO ₂ separation, capture and geological storage technologies have been developed beyond the stage of technical feasibility. Researchers and technicians are planning to improve these component technologies and demonstrate them in integrated configurations. Deployment may start within a decade.

REPORT CARD: Mining

Introduction

In preparation for the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg, leading companies in the mining and metals sector commissioned the International Institute for Environment and Development (IIED) to carry out the Mining, Minerals and Sustainable Development (MMSD) project. MMSD was an independent two-year process of consultation and research aimed at understanding how the mining and minerals sector could contribute to the global transition to sustainable development.

The MMSD report, *Breaking New Ground*,¹ was presented at a global conference in May 2002. The response to the report demonstrated the mining industry's strong commitment to sustainable development. In particular, the Chief Executives of the leading mining and metals companies that sponsored the conference decided to establish the International Council on Mining and Metals (ICMM) to implement the MMSD findings and recommendations. It was agreed that ICMM members would act collectively to build public trust and respect by contributing successfully to sustainable development.

The WSSD Plan of Implementation specifically recognised, in paragraph 44, that "mining, minerals and metals are important to the economic and social development of many countries. Minerals are essential for modern living." It went on to note that enhancing the contribution of mining, minerals and metals to sustainable development includes actions to address the environmental, economic, health and social impacts and benefits of mining, minerals and metals throughout their life cycle; to enhance the participation of stakeholders; and to foster sustainable mining practices through the provision of financial, technical and capacity-building support.

Work in progress

The MMSD report provides a useful benchmark by which to measure progress by ICMM members since the WSSD. First, the report recommended that "ICMM... develop a Declaration on Sustainable Development. Companies would be encouraged to

adopt and sign on to it. The Declaration might ... include a commitment to develop specific, measurable criteria as a set of protocols, along with a system of verification of performance."

In response, ICMM adopted 10 principles of sustainable development² in May 2003 which draw on the findings of the MMSD report. They reflect the values and the policy directions needed to ensure that our operations continually improve and contribute to sustainable development. A recent review of the 10 principles against the proposed IFC safeguard policy and performance standards shows that six principles are more advanced, three are the same and only one is weaker with respect to one element (collective bargaining) that remains contentious in many countries.

To support implementation of the principles, a Global Reporting Initiative (GRI) Mining and Metals Sector Supplement³ was developed during 2003–2004 by a multi-stakeholder working group comprising representatives from industry, investors, environmental NGOs, social development NGOs, labour organisations and the World Bank Group. The Supplement was approved by the ICMM Council in January 2005 with the commitment that all corporate members would report in accordance with the GRI framework within two to three reporting cycles.

Implementation of the sustainable development principles and reporting in line with the GRI framework are mandatory requirements for all corporate members as part of ICMM's Sustainable Development Framework. Work is now under way to design and implement a system of independent assurance. This should be completed in 2006. Underpinning the principles, reporting and assurance is the final element of the Framework—a commitment to sharing advice on good practice. This is demonstrated through the promotion of ICMM initiatives at conferences and workshops, and the publication of good practice guidance documents (described later), as well as a good practice Web site launched in 2004 in partnership with UNCTAD, UNEP and the U.K. Department for International Development (DFID).⁴

¹ <http://www.iied.org/mmsd/>

² http://www.icmm.com/sd_framework.php

³ <http://www.globalreporting.org/guidelines/sectors/mining.asp>

⁴ <http://www.goodpracticemining.com>

The MMSD report also urged governments to take steps to enhance the benefits of mineral development by implementing policies, practices and structures that create demonstrably good governance. ICMM has taken the lead on this topic by initiating a project on the challenge of mineral wealth. It is looking at a selection of developing countries that have benefitted from exploitation of their mineral resources and identifying practical public policies that can foster social and economic development. This initiative will generate recommendations for companies, governments—both at a national and regional level—and other key organisations, aimed at enhancing the socio-economic contribution of the mining and metals sector. Also included will be a tool identifying the key determinants of success in different operating environments which could help inform companies' investment decisions and capacity building efforts. The World Bank and UNCTAD are project partners and the work is being reviewed and tested by a senior level advisory group and through multi-stakeholder workshops attended by representatives from developing country governments, companies, NGOs, donor agencies, investors and academic institutions.

A complementary initiative with the World Bank is focussed at the community level, which has seen the publication of a "toolkit" for community development⁵ to enhance the local socio-economic effects of mineral resource investments as well as to deal with conflicts and disputes. In 2005, a guide to working with communities in emergency preparedness and response⁶ was also published by ICMM and UNEP, using UNEP's Awareness and Preparedness for Emergencies at a Local Level (APELL) programme.

At the global level, the MMSD report proposed an "international register of payments to combat corruption." The Extractive Industries Transparency Initiative (EITI) was launched by the U.K. government in Johannesburg to increase transparency over payments by companies to governments and government-linked entities. ICMM has been an active participant and its corporate members have developed a reporting template⁷ to disclose all revenues in the 20 implementing countries.

The MMSD report identified product stewardship as an issue. ICMM has been advancing work on materials stewardship, risk assessment and risk management,⁸ and materials eco-efficiency through guidance documents and life cycle assessment and management techniques.⁹ ICMM is also actively engaging in the development of the UN's Strategic Approach to International Chemicals Management (SAICM) in support of objectives agreed at the WSSD. Much of this work is being undertaken in partnership with regional, national and commodity associations.

ICMM and IUCN – The World Conservation Union established a dialogue at the WSSD and have been active in several activities since then. Formal terms of reference were revised in June 2004.¹⁰ A multi-stakeholder workshop¹¹ identified a need for guidance for mining companies on biodiversity good practice and this is almost complete, its preparation having been overseen by a joint IUCN-ICMM Advisory Group. The same group supervised the preparation of two discussion papers on biodiversity offsets, the intention of which is to foster debate on this growing topic.

ICMM has also recognised the need to facilitate more meaningful industry engagement with Indigenous Peoples. In 2004, it commissioned an independent review of the issues surrounding Indigenous Peoples and mining and metals operations, and a survey of corporate practices.¹² The review identified a high level of convergence in the issues identified by industry, Indigenous Peoples and other stakeholders, and has suggested follow-up activities. Since then, ICMM has worked with IUCN, as part of the Dialogue mentioned above, to convene a Roundtable on Mining and Indigenous Peoples Issues¹³ held in November 2005, and has also developed a draft position statement which aims to build more effective and constructive relationships with Indigenous Peoples. The draft position statement was released in Q1 2006.

ICMM has completed a review of the use of environmental financial assurance for closure and reclamation by governments around the world¹⁴ and has prepared a guidance paper for governments on effective policy approaches.

In the realm of health and safety, ICMM has established a database that enables sites to benchmark their performance against other members' sites around the world. ICMM also provides funding to MIRMgate—an important database of risk management information.¹⁵ An ICMM conference will be held in 2006, at which operations will share examples of practical approaches that have demonstrated success in improving safety and health performance.

5 http://www.icmm.com/library_pub_detail.php?rcd=183

6 http://www.icmm.com/library_pub_detail.php?rcd=184

7 <http://www.eitransparency.org/reportingguidelines/mininghtml.htm>

8 <http://www.euras.be/eng/project.asp?ProjectId=67>

9 <http://www.uneptie.org/pc/sustain/1cinitiative/home.htm>

10 <http://www.iucn.org/themes/business/mining/iucn-icmm-dialogue-tor-June2004.pdf>

11 http://www.iucn.org/themes/business/mining/history_dialogue.htm

12 http://www.icmm.com/library_pub_detail.php?rcd=175

13 http://www.iucn.org/themes/business/mining/indig_peoples_rtable.htm

14 http://www.icmm.com/library_pub_detail.php?rcd=176

15 <http://www.mirmgate.com>

Future challenges

Public opinion remains ambivalent about the benefits of mineral resource investments, particularly by multinationals in developing countries. Yet history shows that the transformation of natural capital into physical, human and social capital is the key to economic development. Most developed countries and a number of successful developing countries demonstrate the importance of foreign direct investment, sound policies and good governance in triggering economic growth and reducing poverty.

ICMM is working to address the challenges facing the industry and to provide guidance and practical tools to improve performance and deliver results. Technical guidance documents on financial assurance for mine closure, biodiversity management, mining and indigenous peoples, emergency preparedness, community development, materials stewardship, and health and environmental risk assessment for metals have been published or will be soon.



Partnership opportunities

Sustainable development outcomes require commitment and actions from all actors in society, and a shared responsibility between government, civil society and business. Progress is based on the premise that we can manage co-operatively what we cannot manage individually. ICMM aims to catalyse sector-wide actions in concert with governments, donors, labour and community-based organisations through common objectives, shared responsibilities for outcomes, reciprocal obligations and distinct accountabilities.

ICMM welcomes partnerships with organisations that share our objective: the pursuit of sustainable development.

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REPORT CARD: Oil and Gas

Introduction

Access to reliable, affordable, economically viable, socially acceptable and environmentally sound energy services and resources is recognised by governments as being vital to the achievement of sustainable development. Members of the International Petroleum Industry Environmental Conservation Association (IPIECA) and the International Association of Oil and Gas Producers (OGP) produce about two thirds of the world's oil and gas. This document shows the progress made in sustainability since the two organisations collaborated on an industry report to the UN World Summit on Sustainable Development in 2002 (<http://www.ipieca.org/downloads/WSSD.pdf>). It also highlights remaining challenges.

Work in progress

What we said in 2002: developing and investing in advanced technology to meet growing demand for affordable products, secure supplies; enhanced sustainability integration; conducting operations with greater understanding...

For the foreseeable future, oil and gas will continue to be the primary source of energy to meet demands in economic growth. Significant progress in the development and use of renewable sources of energy notwithstanding, their role in the energy mix will remain limited for the next quarter century.

In the decades ahead, there will be more hydrocarbons available, thanks to innovations in recovering previously uneconomic or unknown reserves. These include sub-sea completions, 4-D seismic surveying, remote sensing and reservoir imaging. Companies are also diversifying their energy portfolios to include Gas-to-Liquid (GTL) technology, hydrogen and a variety of renewable energy sources.

At the same time, significant improvements are being made in oil and gas production, refining, processing and distribution to minimise the environmental footprint of these activities and reduce emissions.

A key development here is the way that the industry is working directly with customers to increase efficiencies and limit environmental impacts from the use of hydrocarbons. This involves significant investment in more efficient energy use, such as co-generation as well as the promotion of energy and fuel efficiency in refining, which is a major consumer of energy. Refineries around the world regularly assess their efficiency using the Solomon Energy Intensity Index (EII). This index determines the normalised energy efficiency of a refinery by computing energy consumption for each technology present in the refinery and the type of crude used. This is then used by the refinery to benchmark itself against its peers and against world norms (<http://www.solomononline.com/products.asp>).

To address overall greenhouse gas emissions, the industry has pioneered work in CO₂ capture and storage in geological formations. One international project, for example, involves eight energy companies working with governments, NGOs, and other stakeholders to deliver technology that is cost-effective and adaptable for widespread use by many different industries (<http://www.co2captureproject.org>).

Advanced fuel processing technologies are enabling the production of cleaner fuels for advanced technology vehicles. Initiatives include phasing out lead additives in gasoline and the standardisation of fuel quality specifications in sub-Saharan Africa. The industry is also working with governments and auto manufacturers on the appropriate use of biofuels.

The search for new oil and gas increasingly takes the industry to remote and environmentally sensitive areas. Minimal environmental impact is an achievable objective, as proven in a series of case studies compiled by IPIECA and OGP. Such sharing of best practices promotes continuous performance improvement.

As part of these efforts, the industry is increasingly working to systematically integrate biodiversity considerations within company activities and processes. To support this, IPIECA and OGP have organised a number of regional biodiversity workshops in Latin America, South East Asia, and West and Central Africa to raise awareness and open lines of communication with conservation organisations, academia, governments and NGOs. IPIECA and OGP have also produced guidance for developing biodiversity action

plans for the oil and gas sector. This ‘mainstreaming’ process has benefitted from management tools developed by the Energy and Biodiversity Initiative (EBI – <http://www.theebi.org/>).

Through OGP, upstream companies (i.e. those engaged mainly in exploration and drilling) have reported on safety performance since the mid 1980s. There has been a sustained and significant reduction in lost time injury frequency (LTIF) of around 75 per cent, over the past 15 years. This reflects improved performance for operators and their contractors. In 2002 OGP also began publishing data on aspects of environmental performance (<http://www.ogp.org.uk>).

To promote similar consistency across wider data, in 2005, the industry produced *Oil and Gas Industry Guidance on Voluntary Sustainability Reporting*. In addition, *Petroleum Industry Guidelines for Reporting Greenhouse Gas Emissions* have been developed as well as methodologies to achieve global data consistency in the *Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Gas Industry*.

Oil and gas projects require thorough evaluation of health, social and environmental impacts throughout their duration. Consequently, impact assessments are becoming increasingly integrated into project management systems. Two recent guidelines developed by IPIECA address health and social impact assessments. Companies throughout the industry engage in extensive efforts to protect and promote employee well-being. This includes work on risk evaluation leading to rigorous procedures, training and information programmes for personnel and contractors, and regular workplace inspections.

Where health systems are inadequate or non-existent, oil and gas companies set up their own medical units, which often also provide services to local communities. Partnerships with international bodies and NGOs address issues such as malaria and HIV/AIDS. In early 2006, IPIECA and OGP worked with the Global Business Coalition on HIV/AIDS to produce *Knowledge, Policy and Action – HIV/AIDS management tools for the oil and gas industry*.

Technology transfer and capacity building are ways in which the industry contributes to economic development for society at large, helping host communities to meet basic needs such as infrastructure, health, education, training, job creation and water supply. These objectives can be challenged by complex human rights-related issues, including local conflict, perceived complicity in government and other third party abuses, corruption, indigenous rights, and relationships with state and private security forces.

Revenue transparency can help economic development and a number of companies are supporting the principle of greater transparency on revenue

flows. OGP has developed a training package for industry employees on approaches to combating corruption and the industry plays an active role in the Extractive Industry Transparency Initiative (EITI) that seeks to combat corruption and promote transparency (<http://www.eitransparency.org/>).

Disconnects, however, remain between the industry’s perception of its responsibilities and notions of what others think these should be. Initiatives such as the Voluntary Principles on Security and Human Rights and the United Nations Global Compact are helping to bridge that gap (<http://www.voluntaryprinciples.org/>).

IPIECA has developed a human rights training package to help the industry provide greater clarity on human rights issues.

Future challenges

What we said in 2002: availability of affordable, secure, environmentally sound and socially acceptable energy; improve social dimension with broadened wealth creating benefits; demonstrate balance in meeting energy demand worldwide...

In ensuring secure supplies of affordable, environmentally sound and socially acceptable energy for a growing world population, major challenges include:

- maintaining the health and integrity of ecosystems through responsible operations, including the prevention of pollution and dealing with the legacies of past pollution;
- researching and developing emerging technologies, to help achieve diverse, secure and clean energy supplies;
- addressing the risks and opportunities of operating within an uncertain and fragmented global climate regime;
- operating responsibly in countries with problematic human rights, fragile rule of law and poor governance records;
- improving the social dimension of business in meaningful and measurable ways to broaden the benefits of wealth creation and so help alleviate poverty;
- mitigating any negative impact of large-scale infrastructure projects; and



- liaising with key stakeholders to form lasting partnerships that result in operations with greater transparency and accountability and better use of resources.

Partnership opportunities

This is already happening with governments, international organisations, NGOs, academia and other stakeholders. Some of the oil and gas partnerships that have been established include the following:

- *The Partnership for Clean Fuels and Vehicles*, hosted by UNEP, brings national governments together with the oil and automotive industries. In 2005 the partnership succeeded in phasing out leaded fuels in Africa.
- *The Global Gas Flaring Reduction Initiative* is a forum of governments of oil-producing countries, state owned companies and international oil corporations co-ordinated by the World Bank. The aim is to reduce flaring related to crude oil production.
- *The Extractive Industries Transparency Initiative*, consisting of governments, companies, civil society, investors and international organisations, supports improved governance through publication and verification of company payments and government revenues from oil, gas and mining.
- *Voluntary Principles on Security and Human Rights* is an international, tripartite initiative between governments, companies and NGOs. It assists energy and extractive companies in maintaining the security of their operations globally while ensuring respect for human rights.
- *The Energy and Biodiversity Initiative* is a partnership between four energy companies and five international conservation organisations dedicated to integrating biodiversity considerations into oil and gas operations.

- *The Global Initiative* is an umbrella programme in which the International Maritime Organisation (IMO), IPIECA and other partners work together to encourage and facilitate development and implementation of oil spill contingency plans and to broaden ratification of oil spill-related international conventions.¹

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¹ For more information on partnerships, please visit the IPIECA Web site – <http://www.ipieca.org>

- *The Partnership for Clean Fuels and Vehicles* - <http://www.unep.org/pcfvl>
- *Global Gas Flaring Reduction Initiative* - <http://web.worldbank.org/>
- *Extractive Industries Transparency Initiative* - <http://www.eitransparency.org/>
- *Voluntary Principles on Security and Human Rights* - <http://www.voluntaryprinciples.org/>
- *Energy and Biodiversity Initiative* - <http://www.theebi.org/>
- *Global Initiative* - http://www.ipieca.org/oil_spill/global_initiative.html

INFRASTRUCTURE

The Report Cards in this chapter have been prepared by the respective business and industry groups, who assume full responsibility for the contents thereof.



REPORT CARD: Cement

Introduction

Globally, the cement industry produced an estimated 2.1 billion tonnes of cement in 2004. About 45 per cent was produced in China. After water, cement is the second most consumed substance on earth and is an everyday part of life for the vast majority of the inhabitants of the planet. While making a vital contribution to the construction industry, the making and use of cement is resource and energy intensive, and has a variety of human health, habitat and ecosystem impacts. This Report Card focuses on the European and U.S. parts of a global industry. Cement production in the European Union countries and in the United States represented 18 per cent of the total world production in 2004.

Work in progress

Europe

CO₂ emissions: In 2004, the cement industry in the European Union produced 234 million tonnes of cement and emitted about 0.75 tonne of CO₂ per tonne of cement via direct emissions (fuel combustion and raw material de-carbonation) and 0.05 tonne of CO₂ per tonne of cement via indirect emissions (use of electricity from fuel-based power plants). Direct and indirect emissions of CO₂ together amounted to about 0.8 tonne of CO₂ per tonne of cement.

There are three measures by which the cement industry may save direct CO₂ emissions in the immediate future: a) improvement of energy efficiency; b) reduction of clinker/cement ratio (introduction of useful industrial by-products); and c) increase in the use of waste as alternative fuel (national initiatives; adequate national implementation of certain directives regarding specific wastes).

Voluntary agreements: Long-term agreements can be part of a predictable policy framework to aid planning and investments by companies and they properly reflect the principle of shared responsibility. In Europe, voluntary CO₂ reduction agreements are in place in Belgium, France, Germany, the Netherlands, Switzerland and the United Kingdom. Substantial commitments have been made under these agree-

ments, with reductions of between 7 and 25 per cent. Promises have been kept on the industry side and some of the agreements are now in their second generation.

Emissions trading: The European cement industry participates in the European Emissions Trading Scheme (EU-ETS) established in the European Union at the start of 2005 (EU Directive 2003/87/EC). The WBCSD CSI (World Business Council for Sustainable Development Cement Sustainability Initiative), together with CEMBUREAU, issued a revised Greenhouse Gas Protocol in May 2003 to fit the monitoring and reporting requirements of the European Emissions Trading Directive. A Technical Protocol for the purpose of helping the implementation of the European Commission's Monitoring and Reporting Guidelines was released in January 2004.

Co-incineration of waste: Co-incineration provides society with a good management tool. For example, in recent years, products carrying the risk of "mad cow disease" have been successfully destroyed in a number of kilns in Europe.

Worldwide

POPs under Stockholm Convention: The CSI and CEMBUREAU joined forces to launch an initiative that aims to measure performance and to make recommendations on persistent organic pollutants (POPs) emitted by cement kilns that use hazardous waste as fuel. The second edition of the *SINTEF Report*, published in January 2006 (<http://www.wbcscement.org/fuels.asp>), contains data on POPs in solids. The Report shows that the reported values for clinker are very low (average 1.24ng I-TEQ/kg). Indeed, the presence of PCDD/F (dioxins and furans) in clinker is highly improbable taking into account the high temperature and long residence time in the kiln. The values found may be due to either contamination by the ambient air in the clinker cooler or during the sample preparation phase. Cement Kiln Dust (CDK) was found to contain an average of PCDD/F concentration of less than 7ng I-TEQ/kg, within a range of 0–100.

The Report did not confirm the correlation claimed by the U.S. Environmental Protection Agency in 1999 between PCDD/F concentration and the use of alter-

native fuels. Any formation of PCDD/F in CKD is related to de-novo synthesis and is minimised by proper primary process-integrated measures.

U.S.

CO₂ emissions: In 2002, Portland Cement Association (PCA) members approved an industry-wide goal to reduce carbon dioxide by 10 per cent per unit of material sold from 1990 levels by 2020. The goal applies to total CO₂ emissions by all cement plants in the United States. The targetted emission reductions from cement manufacturing and additional GHG reductions will be achieved through a three-pronged implementation plan.

The first element involves the manufacturing process and includes energy efficiency measures, the use of alternative fuels and raw materials, and other means of reducing carbon dioxide emissions in cement manufacturing. Second, additional reductions will be achieved through product formulation measures, such as the addition of limestone or other materials to reduce the clinker content in portland cement.

Even greater overall reductions are likely to be achieved, however, through the third portion of the PCA reduction plan: product application measures. These emission reductions will come from energy savings achieved by buildings constructed from cement and concrete, which are much more energy efficient than those built from other materials. In addition, preliminary studies indicate that vehicles travelling on concrete roads attain significantly better fuel efficiency than on softer pavements. While application reductions will not be counted towards the industry goal—since they will be achieved by users of cement, rather than manufacturers—they could be dramatic and could exceed the industry's total emissions.

Progress towards the achievement of the industry's CO₂ reduction goal will be tracked using the GHG Protocol developed jointly by the WBCSD and the World Resources Institute (WRI). At this point, the U.S. cement industry is well on its way to accomplishing the goal. Since developing the voluntary industry reduction target, PCA has joined the White House Climate VISION Program, which encourages key U.S. industries to voluntarily reduce greenhouse gas emissions.

As part of PCA's sustainable development initiative, a voluntary code of manufacturing practices was launched in June 2004. This builds upon the environmental progress the cement industry has made during the past 30 years by identifying new methods to better manage waste, conserve resources, improve energy efficiency and make cement in an increasingly environmentally sound manner.

Future challenges

Europe

Energy performance of buildings: Roughly 40 per cent of all CO₂ emissions come from buildings. As a result, CEMBUREAU encourages efforts to promote energy efficiency in buildings through the implementation at the national level of the Energy Performance of Buildings Directive (EPBD – Directive 2002/91/EC). CEMBUREAU is convinced that only an international approach at sectoral level will combine efficiency, equity and competitiveness in reducing CO₂ emissions with requirements of fairness and justice. CEMBUREAU is open to contacts or even partnership with AP6 countries (Asia-Pacific Partnership: Australia, China, India, Japan, South Korea and the U.S.).

Comprehensive health risk study: The United Kingdom Health and Safety Executive (HSE) published the *Portland Cement Dust: Hazard Assessment Document* in February 2006 (<http://www.hse.gov.uk>). The document supports and re-confirms the previous conclusions that “overall the pattern of evidence clearly indicates that occupational exposure to cement dust has produced deficits in respiratory function. However, the evidence available at the present time is insufficient to establish with any confidence the dose-response relationship for these effects.” To address this issue, CEMBUREAU will develop its own action plan in the coming years in addition to existing initiatives by the cement industry at national and international levels.

Crystalline silica: CEMBUREAU has negotiated with other sectors and social partners the first European Social Agreement aiming to prevent risks which could arise from exposure to air-borne crystalline silica in the cement industry and has subscribed to a code of best practice in order to protect its workers, which was developed by CEMBUREAU and the other participating industries.

U.S.

If the industry's CO₂ emissions reduction goal is attained prior to the 2020 target date, the industry will need to decide whether to set a more ambitious goal and, if so, to identify the new benchmark. A significant challenge will be to educate architects, builders and procurement personnel on the environmental benefits of utilising cement-based products in building and paving applications. Depending upon the future legislative and regulatory approach to greenhouse gas emissions in the United States, the cement industry might be confronted with carbon taxes, mandatory cap-and-trade programmes, increased energy costs

and competition from unregulated foreign cement producers.

Partnership opportunities

Europe: CEMBUREAU works in partnership with the WBCSD Cement Sustainability Initiative (CSI); is a member of several UNICE Working Groups (Climate Change, Air Quality, Environment, Integrated Pollution Prevention and Control) and of the ICC Environment and Energy Commission. At EU level, CEMBUREAU also takes an active part in the Alliance for a Competitive European Industry, the Alliance of Power Intensive Industries and in the European Construction Forum (ECF). CEMBUREAU is also a member of the Non-Energy Extractive Industries Panel (NEEIP).

Worldwide: At international level, CEMBUREAU liaises with sister organisations in Australia, Japan, Latin America and the United States on climate change and other environmental issues via the International Cement Industry Network (ICIN).

U.S.: PCA and the U.S. cement industry are involved in the following partnerships: The White House Climate VISION Program, the U.S. Environmental Protection Agency (EPA) Energy Star Program, the EPA Climate Wise Program, the World Wildlife Fund Climate Savers Program, the WBCSD Cement Sustainability Initiative, development and revision of the GHG Protocol and the Pew Center on

Global Climate Change. In addition, PCA has initiated a forum for developing partnerships between the U.S. cement industry and other industries whose by-products might provide sources of fuel and/or materials for cement manufacturing; some of these applications could result in net greenhouse gas emission reductions.

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REPORT CARD: Construction

Introduction

The importance of the construction sector to sustainable development was highlighted by the UN World Summit on Sustainable Development. The WSSD Plan of Implementation pointed in particular to the need for “low-cost and sustainable materials and appropriate technologies for the construction of adequate and secure housing for the poor” (para. 10) and for integrating energy considerations, “including energy efficiency, into the planning, operation and maintenance of long-lived energy consuming infrastructures,” including for the construction sector.

Work in progress

What we said in 2002: reducing CO₂ emissions by raising energy performance of existing buildings; improving health and safety on construction sites; promoting increased training...

“Sustainable development” or, more specifically, “sustainable construction” is increasingly becoming a focal point for the future development of all construction policies across the globe. In other words, unsustainable policies and strategies are no longer acceptable. For all the books and papers written and lectures given on the topic all over the world, fulfilling the aspirations will take decades if not centuries. More realistically, striving for sustainability is better described as a *modus operandi* than an achievable destination.

Indeed, there is hardly any facet or aspect of construction activity that is not affected one way or another by sustainability criteria. The whole concept of “sustainable construction” is therefore one that embraces construction activities in their entirety. In this sense, what has really changed over recent years, is less what the industry physically does, but rather the way in which its various actors perceive and prioritise their actions.

Taking the three pillars of sustainable development in turn, this implies:

In **economic** terms, the integration of sustainability considerations into public and private construction procurement procedures is now attracting a lot of attention. On the one hand, there has been a series of projects carried out at the European level (some financed by funds from the European Commission) while on the other, some major construction clients, especially in the public sector, have drawn up and published their own guidelines. The increased tendency by national governments to award construction contracts on the basis of public-private partnerships also offers specific opportunities to promote more sustainable techniques, in particular where an economic operator is granted a concession over an extended period of time. In these specific circumstances, the concessionaire has a real interest in reducing running and maintenance costs even where this involves a higher initial capital outlay. In turn, this is leading to the promotion of life cycle costing techniques as an integral part of procurement procedures. However, their more widespread use remains something of a challenge for the industry.

In **social** terms, the challenges facing an industry which, in the developed economies at least, is the largest industrial employer, are invariably the same. These are reducing accidents on construction sites and raising the quality of the workforce through more effective training and continuing professional development. Addressing these difficult issues is an ongoing process and there are numerous initiatives taking place at both the national and European levels. These include: dedicated efforts to attract and retain young people in the industry; cross-border thematic visits aimed at spreading best practice, especially in training and education; research into “stress at work,” including measures intended to reduce musculoskeletal disorders; and the negotiation of a social dialogue agreement on “respirable crystalline silica.” A particular highlight was the decision of the European Agency for Health and Safety at Work to designate 2004 the “Year of Health and Safety in the Construction Sector.” This involved numerous actions at the national level throughout 2004 to raise awareness and disseminate the information and documents produced by the Agency, especially on the occasion of the “European Week” held on 18–22 October 2004.

In **environmental** terms, current efforts are focussing on three principal axes:

- Raising the environmental performance of buildings generally;
- Raising the energy performance of buildings, in particular existing buildings; and
- Reducing waste and/or increasing re-use and recycling of building materials.

A European framework standard is currently being developed that is intended to provide the methodology for the assessment and subsequent declaration of the integrated environmental performance of complete buildings and construction works. It is expected to provide the means for the aggregation of the results from a set of supporting standards into a single data set that represents the environmental declaration of the whole building. The aggregation is to be based on the results of the life cycle analysis (LCA) for each of the aspects, i.e. materials, energy use, water use, construction process, design considerations, etc. The standard will describe the assessment of data quality for LCI-data (life cycle inventory) and the effect of data quality on the results of the LCA.

Another parallel initiative concerns the development of “Environmental Product Declarations” (EPDs). To be provided by manufacturers of construction products, EPDs will allow architects and specifiers of construction works to be able to take into account the environmental profiles of individual products when selecting construction products, and thus facilitate the estimation of the overall environmental impact of the completed works.

Certainly the most important environmental issue in the construction sector is raising the energy performance of the existing building stock. Progress over the last few years can at best be described as “less than satisfactory.” Greenhouse gas emissions, having fallen in the late 1990s, are now on the rise again. Any hope that Europe might meet its commitments under the Kyoto Protocol are now in serious doubt. While emissions from the transport sector account for most of the increase, the reality remains that the built environment is still responsible for the largest share of emissions. Paradoxically, it also offers the most cost-efficient solutions, namely raising the energy efficiency of existing buildings. While some European countries have introduced fiscal incentives aimed at encouraging householders to invest in energy saving measures, the gap between what is feasible and what is actually being done remains very disappointing.

Many countries appear to hope that the development and introduction of miraculous new renewable energy technologies will enable them to drastically cut

emissions in the short to medium term. But even if their hopes are fulfilled, which looks increasingly doubtful, the first priority—as well as the most cost-efficient way—is to raise the energy performance of buildings when they undergo major renovation. Over the last few years, a limited number of EU member states have been able to introduce reduced rates of value added tax on labour intensive services including the renovation of existing buildings. Sharply rising energy prices, however unwelcome, will hopefully encourage homeowners to increasingly invest in energy saving measures.

While demolition waste is increasingly being recycled, in recent years, the disposal of waste from construction sites has become a much more difficult issue to address. Experience demonstrates that recycling has its limits and the extent of its application very much depends on local conditions. The landfilling of waste in some countries is proving to be more environmentally friendly than recycling.

Future challenges

What we said in 2002: Further reducing CO₂ emissions in built environment through development and integration of renewable energy technologies; promoting integration of environmental technologies; agree on realistic set of performance indicators against which the sector can report and benchmark its progress...

The ongoing reduction of CO₂ emissions in the built environment will need to be pursued relentlessly for decades to come. Integrating environmentally sound renewable and low-carbon technologies is set to grow in importance. The challenge is to accelerate their uptake in a world where consumers are aware of climate change but reluctant to change their buying habits.

Determining a realistic set of performance indicators has been straightforward enough, but unless ways can be found for the collection of the corresponding data, this initiative is unlikely to make much progress.

Partnership opportunities

CICA is open to suggestions for partnership actions aimed at promoting sustainability and is willing to consider participating in joint actions that can promote increasingly sustainable approaches, not just to construction activities but to a more meaning-

ful role for the construction industry in promoting employment and eradicating poverty through increased social inclusion. This is especially pertinent in developing countries as the construction industry takes over from agriculture as the largest industrial employer.

The Millennium Development Goal for the widespread provision of clean water and sanitation is an area which calls for particular attention and possible partnership activities, since these activities are crucial to the future well-being of citizens, but particularly difficult to finance.

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REPORT CARD: Liquefied Petroleum Gas (LPG)

Introduction

Access to affordable, adequate and appropriate energy services is a prerequisite for sustainable development. It is also essential for achieving the Millennium Development Goals outlined by the United Nations, including the most fundamental objective of poverty reduction. Yet there are currently two billion people worldwide without access to electricity, and a further two billion are dependent on traditional fuels (wood, dung and crop waste) for cooking and heating. Among other concerns, the use of traditional fuels results in respiratory diseases from indoor and local air pollution, reduced productivity from hours spent daily gathering wood (primarily by women and girls), environmental degradation, desertification and constrained income-generation.

A readily available, clean-burning modern energy carrier—Liquefied Petroleum Gas (LP Gas or LPG), made up of propane and/or butane—is an energy option of social, economic and environmental relevance for supporting development, and was recognised in the UN World Summit on Sustainable Development (WSSD) Plan of Implementation (para. 8). The benefits of LPG for energising rural and peri-urban areas are many and real. LPG can play an important role in bringing energy to those without current access: either in the form of direct power, or as a back-up to other energies including renewables such as wind, solar and bio-mass. Given the numerous productive activities (such as ceramics firing, metal working and drying of grain, fruits and other products) to which it can be applied, LPG can contribute to poverty reduction through income generation. In addition, using LPG as a substitute for traditional fuels in meeting household energy needs brings significant health and environmental benefits.

Work in progress

In August 2005, the World LP Gas Association (WLPGA) published a report on indoor air pollution and the beneficial health effects when switching from traditional fuels to LPG. The authors of the report¹ point out that smoke in the home is the fourth greatest cause of death and disease in the world's poorest

countries and 1.6 million people die from it annually, mainly women and children under the age of five. To download *Household fuels and ill-health in developing countries* please go to <http://www.worldlpgas.com/v2/publications.php?id=04>.

Figure 1 (see Annex) shows the pollution emitted by major household cooking fuels per unit of energy under three major categories: CO, total hydrocarbons and particulate matter. This figure, which includes a consideration of the energy efficiency of the fuel/stove system, is a clear illustration of the potential health benefits of switching to LPG.

Aside from its noxious effect on human health, solid fuel use is environmentally sensitive regarding emissions of greenhouse gases. Depending on which fuels and stoves are currently in use, substitution of these in favour of LPG could have significant co-benefits in the form of lower pollution levels in households and lower GHG emissions as expressed in Figure 2.

LPG is the most widely used alternative fuel for road transport. Autogas powers more than 10 million vehicles in over 54 countries worldwide, and offers an immediate, concrete way to improve air quality, especially in urban areas. In terms of air-borne emissions of the principal regulated noxious gases, autogas is among the lowest emitters of all automotive fuels available, with scientific testing suggesting that autogas produces 50 per cent less carbon monoxide, 40 per cent less hydrocarbons, 35 per cent less nitrogen oxides and 50 per cent less ozone-forming substances compared to gasoline. This has both environmental and health benefits.

Autogas can also play an important role in mitigating climate change. For example, autogas can produce on average 20 per cent less CO₂ equivalent to gasoline when total emissions from well to wheel are taken into consideration. When tailpipe emission levels alone are tested, autogas produces up to 15 per cent fewer emissions. In France, recent technology innovation has led to a hybrid electric-autogas vehicle that emits 92 g/km of CO₂, and in 2006, developers expect this level to decrease to below 90 g/km which would represent the lowest level available on the

¹ Kirk R. Smith, Jamesine Rogers and Shannon C. Cowlin of the Environmental Health Sciences, School of Public Health, University of California, Berkeley.

market. In addition, autogas is mitigating airborne emissions not only in many of the world's most polluted cities, including Beijing, Mumbai and Bangalore but also in European cities, including Vienna, Warsaw and Istanbul.

Future challenges

Despite significant domestic use in several economies, LPG remains little known by key stakeholders and policy-makers. As a hydrocarbon, LPG is often disregarded as it does not fit into the renewables category, however, LPG is cleaner than other fossil fuels and is a suitable fuel to back-up intermittent renewable energy sources such as solar and wind.

LPG can help the shift towards a "low-carbon" economy because LPG features significantly lower GHG emissions than other commercially available fossil fuels such as coal, light and heavy petroleum fuels and natural gas in some applications. Moreover, LPG exhibits significantly lower GHG emissions over traditional fuels such as biogas, kerosene, charcoal, dung cake and wood used for cooking and home heating by billions of people in the developing world.

Thus, there is a good case for government support to the LPG sector in developing countries, based particularly on the positive contribution the fuel can make to more sustainable energy use. Government policies and measures can strongly influence LPG market development and active government support can catalyse LPG market take-off and establish a virtuous circle of growing market potential, increased investment and expanded availability.

In Brazil, penetration of LPG services was aided substantially by government programmes and subsidies over three decades, during which LPG subsidies helped to keep energy prices stable. The results of the programme were dramatic, allowing LPG use to rise from 18 per cent nationwide in 1960 to 98 per cent of households in 2004. The penetration at 93 per cent of households in rural areas is particularly impressive given the difficulty of reaching remote low-density populations. Since market deregulation in 2001, the government assists low-income families to purchase LPG through a voucher system. The programme benefits are available only to families with a monthly income per capita that is no more than half the minimum-wage income.

Partnership opportunities

In order to support the achievement of critical energy-related sustainable development goals, the

United Nations Development Programme (UNDP), in collaboration with WLPGA, has initiated The LP Gas Rural Energy Challenge. This is a public-private partnership (PPP) for energy services provision involving governments, UNDP country offices, private sector entities, local communities and non-governmental organisations. Building upon the individual strengths of the partners involved, the objective of the initiative is to bring LPG to peri-urban and rural populations by addressing two critical issues: availability and affordability.

Since the launch at the Johannesburg Summit 2002, the LP Gas Rural Energy Challenge has been active in six countries: Ghana, Honduras, Morocco, South Africa, Vietnam and China. The global LPG industry continues to take an interest in development issues and will continue the Challenge for another three-year period.

Convinced of the role that LPG can play in helping to achieve sustainable development goals, the LPG industry is looking forward to forging new forms of PPPs aimed at responding to the challenge of rural and peri-urban energisation and the need to deliver LPG in developing countries worldwide. The industry is particularly interested in developing key partnerships with local microfinance institutions, and in particular, the WLPGA will be launching a microfinance pilot programme in Morocco. This collaboration between the local LPG operators, a national microfinance institution and the UNDP field office will address the upfront cost of LPG equipment, which is a key barrier to developing LPG markets in rural and peri-urban areas.

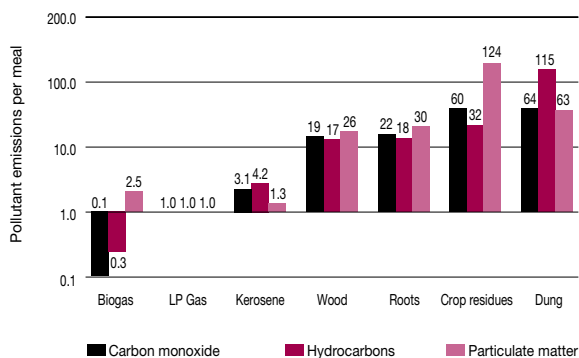
Thanks to its portability, LPG can also serve an important role in disaster relief. The LPG industry partnered with UNHCR to donate LPG packages to a transitional shelter in Sri Lanka. However, efforts to help the tsunami victims revealed that the industry was not prepared for large-scale aid interventions and that aid agencies were unfamiliar with the product. In 2006, the LPG industry would like to form partnerships with NGOs and international agencies active in disaster relief.

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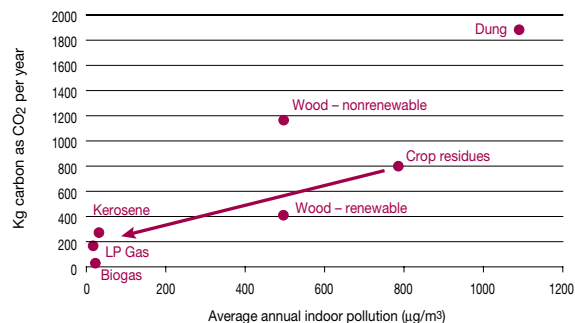
Annex

Figure 1. The Energy Ladder: Relative pollutant emissions per meal. Health-damaging pollutants per unit energy delivered: ratio of emissions to LPG. Note the use of a log scale in the figure. The values are shown as grams per mega joule of energy delivered to the cooking pot (g/MJ-d).²



2 Data from Smith, K. R., R. Uma, et al. (2000). *Greenhouse Gases from Small-Scale Combustion in Developing Countries: Household Stoves in India*. Research Triangle Park, NC, U.S. Environmental Protection Agency.

Figure 2. Estimated indoor particulate pollution versus greenhouse emissions in India. Co-benefits for climate and health of changes in household fuels in India. For comparison, the health-based standard for particle air pollution is about 50 µg/m³. The arrow illustrates a shift from crop residues to LPG for one household, which would decrease indoor air pollution by 95 per cent and GHG emissions by 75 per cent.³



3 Ibid and Smith, K. R., J. Zhang, et al. (2000). "Greenhouse implications of household fuels: An analysis for India." *Annual Review of Energy and Environment* 25: 741-763.



REPORT CARD: Electricity – e7

Introduction

The electricity sector report for the 2002 World Summit on Sustainable Development (WSSD) described the contributions of the sector to sustainable development and set two goals for guiding the work to meet remaining challenges. This Report Card examines the progress of the sector in meeting these challenges and goals.

1.6 billion people around the world continue to live without electricity. The three key challenges for providers of electricity are availability, accessibility and affordability. Electric companies, in their role in addressing these challenges, are focussing on two goals:

- implementing best practices to guide operations, including using local energy resources to efficiently generate and deliver electricity while protecting the environment; and
- establishing partnerships with governments, private sector and non-governmental organisations, financial and development institutions and technology providers from around the world to share expertise.

Work in progress

What we said in 2002: providing affordable electricity access to everyone; promoting enabling regulatory frameworks to create markets and reduce costs of distributed and centralised generation; establishing efficient transmission networks to pool demand and supply in all regions of the world...

In the three years since the publication of the UNEP sector reports, new realities have influenced the planning, generation and delivery of electricity supply:

- threats to energy security and rising fuel prices;
- market changes;

- technological progress;
- entering into force of the Kyoto Protocol; and
- changing public opinion and public policy.

The progress in addressing the challenges and goals are briefly examined in terms of these realities.

Threats to energy security and rising fuel prices, especially natural gas, continue to demonstrate the importance of domestic sources of electricity, the benefits of a mixed portfolio of renewable (hydro, wind solar), fossil and nuclear fuel sources, and the increasing acceptance of the role of all sources of electricity in meeting demand. World Energy Council (WEC) and International Energy Agency (IEA) studies confirm the need to develop all sources of electricity while maintaining acceptable social and environmental standards. The path to electrification must be adapted for a given region and its population taking into consideration each country's particular economic and socio-political factors. In addition, even where electricity is available in developing countries, reliability, dependability and affordability of electricity supply and delivery, often hindered by lack of or poor maintenance, remain critical issues.

Markets for energy have undergone various changes: in some countries, increased consumer preference for renewables; self-generation; deregulation; and re-regulation trends have been observed.

Electricity sector investment in research and development of energy generation and delivery of emerging and re-emerging *technologies*, commercialised at sizes to capture economies of scale, covers the full spectrum of the supply mix: conventional sources of electricity; renewables; and new technologies (advanced fossil fuel technologies, new generation nuclear, hydrogen, fuel cells, photovoltaics, etc.). Initiatives in demand-side management, energy efficiency (including heat rate improvements for fossil plants), and electricity end-use aim to promote effective and economical usage of energy.

Since the WSSD, new nuclear plants have been committed in some European and Asian countries, including China and South Korea, and the debate has been re-opened in countries such as Canada, Italy, the U.K. and the U.S. Companies are also continuing to

take a proactive role in improving access to electricity and its reliability in various developing countries, usually in partnerships with UN agencies, international institutions or local governments. Providing access to electricity appears to be the key factor in breaking the vicious cycle of poverty, and is a necessary condition for any economic development. The e7 has completed construction of a demonstration project (micro-hydro) in a village of some 50 households in Bhutan; the project has a strong sustainable development value and has been registered under the Clean Development Mechanism of the Kyoto Protocol. Nevertheless, too often such initiatives have remained at the demonstration phase, as illustrated by this e7 project, and there is much to do before they become commercially viable and are replicated on a wide scale.

Human capacity building activities and new capital projects demonstrate interest by many groups in diffusing efficient electricity generation technologies to developing countries. Work to analyse the barriers to the diffusion of these technologies has been undertaken by different institutions, including the e7, an association of electricity generating companies, which published the *Renewable Energy Technology Diffusion Report* (2003).

The 2005 Bonn Renewables Conference gave impetus to role of renewables in sustainable development with the release of an international programme of action for the private sector, a political declaration, policy recommendations and new commitments for investment.

With the *entering into force of the Kyoto Protocol*, carbon constraints are becoming a factor in electricity supply planning in many countries. The Clean Development Mechanism, Joint Implementation and emissions trading can provide incentives to reduce greenhouse gas emissions, although streamlining of procedures and approvals is required to attract significant capital from the private sector. The European Union emissions trading system requires a more stable long-term framework, the 2005–2012 period not being sufficient given the time constants of the investments involved in the energy sector.

Climate change has emphasised the importance of leapfrogging in developing countries directly to low-emission electricity generation technologies. For example, the immediate implementation of high efficiency coal-fired generation and, eventually, integrated gasification combined cycle with carbon capture and storage in developing countries could greatly reduce existing emissions and improve resource use efficiency.

Changes in public opinion and the ensuing public policy changes have repercussions on the market. In certain countries, public concern over the environment is driving greater interest in renewables and

other clean generation technologies. For example, some countries have adopted public policies to provide incentives through tax credits and loans for clean generation technologies, or—on the contrary—made policy decisions to phase out higher emitting technologies (conventional coal) or less publicly accepted technologies (nuclear in certain countries). However, nuclear power is increasingly being considered as a viable and clean source of generation and is therefore undergoing a revival in many countries.

Agenda 21 has encouraged members of the electricity sector to support human capacity development, strengthen institutions and, in so doing, promote the diffusion of good practices.

An electricity sector supplement of sustainable reporting guidelines is currently being drafted under the Global Reporting Initiative (GRI). These voluntary guidelines address reporting on the economic, environmental and social dimensions of activities.

Future challenges

What we said in 2002: all companies implementing best practice guidelines; public-private and multi-stakeholder partnerships to expand access to people without electricity; recognising nations' right to use indigenous energy sources (including fossil fuels); employing efficient technologies to convert primary fuels into electricity...

The electricity sector in developing countries will continue to suffer from a chronic lack of financing. IEA estimates that an additional investment of US\$16 billion per year in the electricity sector in developing countries would be necessary to achieve the Millennium Development Goal to reduce poverty by one-half by 2015.

All energy sources should be considered as options to meet increasing electricity demand. They should be evaluated on their merits and relative attributes, recognising that each faces issues, barriers and opportunities including cost, performance, safety, primary resource depletion and energy security.

Enabling frameworks, including transparent and stable economic and uniformly enforced regulatory systems, financing mechanisms, free markets and fair competition, when provided by governments, will support investment in the electricity sector, thereby allowing benefit from local and foreign direct investment (FDI).

Energy efficiency is critical to any comprehensive sustainable energy strategy. Joint efforts by govern-

ments and businesses are key to continuing the promotion and enhancement of energy efficiency along the value chain. Energy efficiency provides many benefits to society, notably by decreasing energy consumption rates thereby improving energy security and reducing negative impacts on the supply and use of electricity.

Barriers to technology transfer persist for reasons such as lack of national energy policy, social trust issues and investment risks. Governance issues are important in developing countries, where utilities, often under government ownership or control, lack autonomy in making decisions and reforms. Lack of finance for reform and electrification projects can be a consequence of poor governance. Capacity building is needed to promote acceptance and implementation of the new technologies.

Electricity challenges should be addressed through integrated policies that also take into account issues including development priorities and needs; social conditions and aspirations; trade rules; environmental policy innovation opportunities; technology transfer policies; energy efficiency; market restructuring; and customer preferences.

Partnership opportunities

In a world of escalating demand for transparency and engagement, dialogue will need to be broad and include a range of stakeholders. Governments, businesses and other key stakeholders should therefore work in partnership to achieve the common goal of providing adequate, affordable electricity for sustainable development.

New private-public partnerships have catalysed the establishment of human capacity development programmes and activities to transfer electricity generation technologies to developing countries.

Examples include the Global Compact's Growing Sustainable Business initiative; the Global Village Energy Partnership (GVEP); Global Network on Energy for Sustainable Development (GNESD); World Bank public-private partnerships; Asia-Pacific Partnership for Clean Development and Climate (including Kyoto and non-Kyoto member governments and leading electricity companies); e7 partnerships with UN agencies; The Energy and Resources Institute (TERI); the Latin American Energy Organization (OLADE) and others.

The project-based Kyoto mechanisms can promote partnerships to develop new sustainable electricity supply and mitigate greenhouse gas emissions.

Access to higher education in sustainable energy development is a priority for the electricity sector and the e7 Group has established an education programme for students from developing countries to pursue advanced degrees in sustainable energy development.

International financial institutions such as the World Bank and governments have to develop and promote innovative financial tools and risk alleviation mechanisms to achieve investment in developing countries.

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REPORT CARD: Electricity – Renewables

Introduction

The importance of renewable energy to the achievement of sustainable development and the Millennium Development Goals has been recognised at the highest levels.¹ This first renewables sector report since the World Summit on Sustainable Development (WSSD) provides an overview on progress since 2002. It has been prepared by a number of different renewable energy associations, contact details for which are included at the end of the document.

Work in progress

In 2006, the renewable energy industry continues its rapid expansion, with technology costs declining and both sales and revenues increasing. From the REN21 Global Status Report,² highlights include:

Investment

- About US\$30 billion was invested in renewable energy worldwide in 2004 (excluding large hydropower). Conventional power sector investment in the same period was approximately \$150 billion.
- Direct jobs worldwide from renewable energy manufacturing, operations and maintenance exceeded 1.7 million in 2004, including some 0.9 million for biofuels production.
- An estimated US\$500 million of international aid is provided annually to developing countries for renewable energy projects, training and market support. The German Development Finance Group (KfW), the World Bank Group and the Global Environment Facility (GEF) provide the majority of these funds, with dozens of other donors and programmes providing the rest.

Capacity

- Renewable power capacity totals 160,000 megawatts or 160 gigawatts (GW) worldwide (excluding large hydropower), about four per cent

of global power sector capacity. Developing countries have 44 per cent of this capacity, or 70 GW.

- The fastest growing energy technology in the world is grid-connected solar photovoltaic (PV), which grew by 60 per cent annually from 2000–2004 and covers more than 400,000 rooftops in Japan, Germany and the United States.
- Wind power has the greatest capacity of new renewable energy sources, growing 28 per cent per year from 2000 to 2004 and now totals 60 GW, led by Germany with almost 17 GW installed as of 2004. About eight GW of new capacity was installed worldwide in 2005 alone.
- Solar thermal collectors provide hot water to nearly 40 million households worldwide, most of these in China, and more than two million geothermal heat pumps are used in 30 countries for building heating and cooling.
- Production of biofuels (including ethanol and biodiesel) exceeded 33 billion litres in 2004, about three per cent of the 1,200 billion litres of gasoline consumed globally.
- More than half of the world's 61 GW of small hydropower capacity exists in China, where an ongoing boom in small hydro construction added nearly four GW of capacity in 2004.
- Large hydro supplied 16 per cent of global electricity production in 2004, down from 19 per cent a decade ago. Large hydro totalled about 720 GW worldwide in 2004 and has grown historically at slightly more than two per cent per year (half that rate in developed countries).
- There were more than 4.5 million “green power” customers in Europe, the United States, Canada, Australia and Japan in 2004. These customers

¹ See, for example, *World Summit on Sustainable Development Plan of Implementation*, paras. 8, 19, 56; *2005 UN World Summit Outcome*, para. 60.

² *Renewable Energy Policy Network for the 21st Century*.

voluntarily purchase power from renewable energy sources at the retail level or via certificates, often at a price premium.

- Sixteen million households cook and light their homes with biogas, and two million households use solar lighting systems.

Costs

Although external costs of conventional (fossil and nuclear) energy sources are not reflected in market prices in most cases, renewable energy sources already contribute to stabilising and even decreasing energy prices. Due to continued price reductions and increasing prices of conventional energy sources, wind energy in particular is increasingly cost-competitive with conventional options in good sites. Some indicative costs are:

- Grid-connected wind, US\$.04–.10/kilowatt-hour (kWh), costs have declined 12–18 per cent for each doubling of capacity and are half the cost of 1995.
- Grid-connected PV, \$.20–.40/kWh, costs have declined 20 per cent for each doubling of capacity.
- Geothermal power, \$.04–.07/kWh, costs continue to decline.
- Biomass (for power production), \$.05–.12/kWh.
- Solar thermal power, \$.12–.18/kWh, down from \$.44/kWh in the 1980s.
- Hydroelectricity, \$.03–.04 (greater than 10 MW), \$.04–.07 (less than 10 MW), costs stable
- Ethanol fuel, \$.25–.50/litre, depending on location.
- Biodiesel, \$.40–.80/litre, costs declining.

Policy development

Policies to promote renewable energy have dramatically increased over the past few years. At least 48 countries worldwide now have some type of renewable energy promotion policy, including 14 developing countries. By 2005, at least 32 countries and five states/provinces had adopted feed-in policies (mandating a premium price for renewable energy), more than half of which has been enacted since 2002. At least six countries and 32 U.S. states have enacted renewable portfolio standards requiring percentage of total generating capacity from renewable energy sources. Half of these have been enacted since 2003.

The International Hydropower Association (IHA) is developing a protocol for assessing hydropower according to specific sustainability criteria through a simple tool for benchmarking and reporting. A first draft of the IHA Sustainability Assessment was launched in 2004 and the latest draft was released for consultation in February 2006.

As a sign of progress, many corporate consumers—among them banks and telecommunications firms—are now profiling their decision to source an increasing amount of their power from renewable sources.

Future challenges

The potential of renewable energy to provide abundant, clean and accessible energy is now widely accepted. The greatest challenges for the renewable energy industry are to reduce costs, improve technology and develop new markets, particularly in developing countries where clean modern energy services are a fundamental step to achieving the United Nations Millennium Development Goals. The rapid growth of the renewable energy industry, however, has resulted from a combination of technical advances and government policies. To continue this trend, favourable government policies are critical. These include long-term, transparent and consistent renewable energy targets and supportive financial mechanisms. Also crucial are the maintenance and enforcement of standards, support for research, development and demonstration of projects.

Industry representatives have identified the following key issues for governments to accelerate renewable energy deployment:

- remove all energy subsidies and enforce the internalisation of all externalities to create competitive markets;
- pursue compensatory regulatory frameworks that encourage renewable energy developments and provide sufficient financial security to promote long-term investment until subsidies and market distortions are removed;
- improve the Kyoto Protocol framework to make it more favourable for renewable energy, including a special mechanism for renewable energy deployment;
- increase the share of local content under the OECD consensus on public export credits which should be increased to 50 per cent for renewable energy technologies;

- amending WTO law so that national governments have the explicit right to prioritise renewable energies and to internalise external costs of fossil and nuclear sources;
- support the financial and technical development through institutions such as the World Bank, Asia Development Bank and other international and national organisations;
- support developing nations to facilitate greater uptake of renewable energy technologies through new dedicated institutions and funds; and
- encourage the interaction of global networks and alliances that contribute to greater co-operation and prioritisation between renewable energy technologies, accompanied by a new independent international authority as proposed by the World Council for Renewable Energies (WCRE).

Partnership opportunities

Although growing rapidly, the renewable energy industry is still relatively small and represented by a number of bodies and institutions. Some of these act as umbrella institutions, particularly to represent all geographical areas and global issues. Industry organisations actively seek meaningful partnerships and include the World Wind Energy Association (WWEA), the International Solar Energy Society (ISES), World Council for Renewable Energies, International Hydropower Association, European Renewable Energy Council, American Council on Renewable Energy, European Business Council for Sustainable Energy, European Photovoltaic Industry Association, European Biomass Association, Solar Energy Industries Association and others. Moreover, possibilities to co-operate exist between public and private organisations, such as UN agencies, national governments as well as research institutes and NGOs.

The International Renewable Energy Alliance (IREA) is a partnership between the World Wind Energy Association (WWEA), the International Solar Energy Society (ISES) and the International Hydropower Association (IHA). The main objective of this initiative is to assist the integration and mutual support of renewable energy technologies, and to work more closely with the International Energy Agency (IEA) in the compilation and verification of renewable energy resource data.

The European Business Council for Sustainable Energy (e5) is looking for partners in their project *e-tum 21* to help bridge the “business as usual” scenario with the vision of a solar age. E5 is seeking rep-

resentatives from the energy sector, environmental NGOs and politicians who deal with the issues of the next power plant generation and who are willing to start an open dialogue. The e5 project e5-SEA with the Renewable Energy and Energy Efficiency Partnership (REEEP) seeks partnerships with EU institutions, national governments and sponsors from the private sector.

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REPORT CARD: Public Transport

Introduction

Mobility is an important prerequisite for economic growth in both the developed and developing world. Public transport plays a vital role in enabling this growth and is the backbone of sustainable urban transport systems in many cities all over the world. Public transport includes all modes of transport in which passengers do not travel in their own vehicles. In the context of this Report Card, this means metros; regional and suburban commuter rail; light rail; tramways; and all types of bus and water transport operated by either public or private organisations within an urban or regional context. Taxis, air transport, and inter-city coach or high speed or inter-city rail services are not included.

The author of this report, the International Association of Public Transport (known by its French acronym, UITP – Union Internationale des Transports Publics) represents some 2,700 members in 90 countries from all modes of public transport. Members also include local, regional and some national authorities responsible for transport and the supply and service industry.

Research by UITP in 50 cities worldwide shows the overall share of public transport has remained stable (1995–2000)¹ despite the explosive growth in the number of vehicles worldwide. The majority of this growth can be found in inner city areas in the developed world that have reached the saturation point with private cars and where modern public transport networks offer attractive alternatives.² (Examples include Brussels, which has experienced a 50 per cent increase in public transport ridership—all modes—between 1999 and 2004, and London where bus patronage is back up to levels last seen in 1947. And Helsinki has reduced car use by 10 per cent.)

On the other hand, passenger figures in the developing world are generally falling due to the new affordability of cars, a lack of investment and clear regulation for public transport combined with an unattractive, low quality offer.³ However this is not the case in places where modern, efficient networks have been put in place such as in Bogota, Colombia. There, 72 per cent of all trips are made by public transport. A high quality, city-wide bus rapid transport system—the Transmilenio—has reduced local pollu-

tion by 40 per cent and road accidents by 93 per cent (2002–2004 data).

The challenge today is to integrate environmentally sound, affordable and socially acceptable transport policies at national, regional and local levels addressing the many perversities that exist in present fiscal systems. This includes land use planning policies and increased capital investment in infrastructure creating widely accessible public transport networks with the goal of providing safe, affordable and efficient transportation for the majority of citizens. This would increase overall national energy efficiency; limit urban sprawl; reduce congestion, local and GHG pollution; and reverse the adverse health and safety effects of a car-dominant society. Public transport on average uses 2.2 times less energy than private transport—a net advantage for all countries that have to import fossil fuel, but of particular importance for the developing world.

Transport strategies today must include a combination of demand management measures, improved vehicle technologies and cleaner fuels while reflecting specific regional, national and local conditions. For example, different strategies are required in the developed world, where the population is aging, than in the developing world, where people are younger on average.

Work in progress

UITP Sustainable Development Charter – a measurable commitment: UITP launched a Charter on Sustainable Development in 2003. This charter is a voluntary, but measurable, commitment for the sector to report on environmental, economic and social performance (see Annex 1). As of January 2006, 107 organisations from 25 countries have signed up.

¹ *UITP research (Mobility in Cities Database) from 50 cities worldwide updating the Millennium Cities Database published in 2001.*

² *For example Paris, Brussels and London show between a two and four per cent annual increase in passenger use (Source: Sustainable Charter Signatory documentation).*

³ *Other notable exceptions include Mexico, Jakarta and Seoul. The modern, strongly branded Transmilenio in Bogota is used by at least five million passengers daily and is profitable.*

Signatories include public and private operators, organising authorities, regional governments, and the supply and service industry. An ongoing series of international coaching and training workshops has been held. Two major reports—*Ticket to the Future* and *3 stops to sustainable mobility* and *Bringing Quality to Life*—have been produced. The latter is the first report by the sector on the contribution that public transport brings to sustainable development and is illustrated by over 55 examples from all over the world. A full updated list of signatories and the reports in several languages are available free of charge from [http://www.uitp.com](http://www UITP.com).

Collection of statistics: Facing the difficulty of incomplete worldwide statistics on public transport, UITP has updated its Millennium Cities Database, first published in 2001, with a new version entitled *Mobility in Cities*. The 120 urban mobility indicators, collected from 50 cities worldwide, help to estimate the true value of public transport to sustainable development and compares the evolution of transport in metropolitan areas from 1995 and 2001. This research provides a quantified and up-to-date account of the relationship between urban structure, modal split, performance and cost of transport to the community, and other factors that influence the attractiveness of public transport.

Among other things, it shows that:

- the cost of transport for the community (all transport and as a percentage of local GDP) is 50 per cent less in cities that have a high share of public transport when compared with cities where the private car is dominant; and
- cities characterised by the lowest cost of transport to the community are often those where expenditure in public transport is the highest. For example between 1995 and 2001 cost of transport decreased in London from 8.5 per cent to 7.5 per cent local GDP; in Madrid from 12.2 per cent to 10.4 per cent and Geneva from 10.2 per cent to 9.4 per cent.

Stakeholder consultation: A comprehensive series of stakeholder consultations were held to debate the future of public transport. The output and UITP paper entitled *From Vision to Action: PT 2020*, is meant to stimulate a strategic discussion about the future of the sector and how to ensure its sustainability. The document is available via the Web site or from UITP and sets out what needs to be done by the sector to address present challenges with key pathways for operators, organising authorities, and the industry aimed at fostering greater collaboration among all stakeholders.

Future challenges

The world is becoming increasingly urbanised. Cities and towns are centres of economic growth and employment, centralising much of a nation's power and wealth. Yet development is hampered by congestion, high levels of air pollution and accident rates.

At the same time, a surprising number of developing countries still lack even basic public mobility networks. The promises of poverty reduction and providing basic access to education, health and employment as set out in the United Nations Millennium Goals are unlikely to be achieved by 2015 or even 2030 unless there are dramatic increases in investment in public transport systems in these cities. Developing countries risk taking longer and paying a higher price for their economic development in terms of environmental degradation and social inequality if basic access is not made available to the majority of the population. In this respect, affordable, sustainable transport is critical, allowing those with least choice to break out of poverty and contribute more fully to the economy.

Adequately addressing the highly complex challenges of sustainable mobility is therefore essential to alleviate poverty and its success depends on integrating environmental, social and economic concerns in core decision-making. Leadership and commitment to the Johannesburg Plan of Implementation (JPOI), where public transport is clearly mentioned (see Annex 2), has not been forthcoming. Indeed public transport is still often neglected in many cities in developing countries as they struggle with exploding population growth, inadequate infrastructure and limited capacity for planning integrated transport networks and sustainable urban development.

By 2020 the balance of power and wealth in the world will have changed, and it is clear that the challenge of satisfying current and future mobility needs cannot be met without major changes in existing policies and processes. A variety of strategies and policies are needed that address not only technical innovation, but also managing demand, reducing the overall number of trips and increasing the choice of suitable alternatives.

The following six goals can be considered as a framework for the basis of a global initiative to make the world's public transport systems more sustainable:

- limit greenhouse gas emissions from transport to levels that will not endanger the climate;
- address and reduce traffic congestion;
- significantly reduce the number of road transport related deaths and injuries;

- narrow the mobility divide within countries between levels of society and also between the richest and poorest counties;
- improve mobility opportunities for all levels of society giving access to primary services of health, education and employment; and
- reduce conventional emissions and transport-related noise so that they do not constitute a significant impact on public health.⁴

Efficient, effective and attractive public transport networks integrated with other sustainable modes such as walking, cycling, and car sharing are vital in meeting the mobility needs of all urban citizens in a sustainable way.

Partnership opportunities

Recent UITP partnerships (2002–2005) include:

- Joint events with UIC (Union Internationale des chemins de fer/International Union of Railways) and UNIFE (Union des Industries Ferroviaires Européennes/Union of European Railway Industries); ‘Keep Kyoto on Track’ side events and background papers on climate change COP-9; SB-20; COP-10, SB-22. (Information available on <http://www.railway-mobility.com>).
- UITP/UNEP Memorandum of Understanding signed in June 2005 allowing UNEP more direct contact with the worldwide urban transport expertise of UITP.

- “The world is your home – take care of it,” 30-second animation for TV by UITP and UNEP in five languages to help inspire people to think about changing one or two trips a month, to ease congestion and pollution in cities. This public awareness campaign was made possible through UNEP industry association connections with McCann-Erickson.

UITP would welcome further partnerships, particularly in researching and piloting a methodology for the measurement of greenhouse gases from urban transport, clean air initiatives and energy use in urban areas.

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⁴ Taken from *Bringing Quality to Life, first sector report showing the contribution of public transport to sustainable development*. (<http://www.uitp.com>)



Annex 1

Economic, social and environmental performance of the public transport sector

Economic performance

The cost of transport to the community goes down as the share of trips taken by public transport increases.

	Total share of public transport for all trips		Cost of transport to the community (% of local GDP)	
	1995	2001	1995	2001
Geneva	18.8 %	21.7 %	10.2 %	9.4 %
London	23.9 %	26.8 %	8.5 %	7.5 %
Madrid	23.4 %	29.1 %	12.2 %	10.4 %
Paris	27.1 %	27.5 %	6.8 %	6.7 %
Vienna	43.2 %	46.6 %	6.9 %	6.6 %

An increasing number of individual networks are able to cover their operational costs; and several are profitable, such as the MTR Ltd. Hong Kong.

Environmental protection

Clean technologies are widespread with the use of particulate filters cutting local emissions and many initiatives with alternative fuels including hydrogen, bio-fuel and hybrid are already being piloted by the sector.

Social advantages

The employment public transport provides should not be neglected. Although there are no comprehensive statistics available for total numbers employed in public transport, national statistics for European Member States suggest that direct employment in public transport ranges from one to two per cent. For the EU-25, UITP estimates that around 900,000 people are employed in urban public transport. Studies in Europe and the U.S. show that around 30 jobs are created for every €1 million invested in public transport infrastructure, and around 57 jobs for a similar investment in public transport operations. (Source: UITP, *Public Transport, the Lisbon Strategy and Sustainable Development*, and *Public Transportation and the Nation's Economy – A Quantitative Analysis of Public Transportation's Economic Impact*. Prepared by Cambridge Systematics, Inc. with Economic Development Research Group. October 1999).

Annex 2

Johannesburg Plan of Implementation – Paragraph 20

Promote an integrated approach to policy-making at the national, regional and local levels for transport services and systems to promote sustainable development, including policies and planning for land use, infrastructure, *public transport systems* and goods delivery networks, with a view to providing safe, affordable and efficient transportation, increasing energy efficiency, reducing pollution, reducing congestion, reducing adverse health effects and limiting urban sprawl, taking into account national priorities and circumstances. This would include actions at all levels to implement transport strategies for sustainable development, reflecting specific regional, national and local conditions, so as to improve the affordability, efficiency and convenience of transportation, as well as improving urban air quality and health, and reduce greenhouse gas emissions, including through the development of better vehicle technologies that are more environmentally sound, affordable and socially acceptable.



REPORT CARD: Railways

Introduction

Transportation is closely linked to the health of the global economy and brings enormous benefits to society. But it also has costs. Not only does it account for approximately 25 per cent of global CO₂ emissions, but there are other costs such as accidents, noise, congestion, land use and air pollution, with related damage to health, the environment and buildings. The significance of these collateral costs is linked to the enormous increase in demand for transportation—in both passenger and freight services. If countries such as Brazil, China, India, Korea, Mexico, Russia and Thailand adopt western travel patterns, the environmental and social impacts will be critical. New thinking is required: the railway sector is crucial to the creation of sustainable transport systems. Bringing about a modal shift from road (and in some cases, air) transport to rail is the key to achieving a sustainable global transport policy for the future. The mission of the International Union of Railways (UIC), a global member railway organisation, is to “promote rail transport in order to meet the challenges of mobility and sustainable development.”

Work in progress

What we said in 2002: collection of environmental data on a global level; new technical solutions in rolling stock, infrastructure and procedures resulting in significant sustainability improvements; better education and training; policy framework with more economic incentives...

Social dimension

The rail sector contributes significantly to the social dimension of sustainable mobility as a means of transport, through its stations, its workforce, and its community involvement. Furthermore, railway companies employ about 7.5 millions around the world.

Human rights: Rail transport contributes to human rights by providing basic access to mobility and a fair

distribution of mobility resources to passengers and freight, and to urban and rural areas. In addition, rail serves large groups of children, youths, functionally disabled and elderly people without access to cars. European railways have signed a Passenger Charter.¹ This is a voluntary agreement to raise the quality of service standards provided to their customers including, for example, user-friendly route planning and information, facilitation and assistance for passengers with reduced mobility.

Stations: Train stations offer much more than departure and arrivals for train passengers. They are a space for community and local development. This contribution to society is an important part of the rail sector’s identity. The UIC World Seminar, “Next station” (2005), outlined many advances in this field. For example, a Japanese rail company is offering “station nursery schools” and “nursing care” and a daytime service centre for seniors at the train station in response to the changing needs of Japanese society.

Safety: Rail transport is one of the safest forms of transport, particularly compared with road transportation. The rail sector is working hard to maintain this record. Over recent years, the UIC has developed a safety database for the rail sector. At this stage it is limited to Europe, but there are plans to expand its reach and scope in the future. In 2006, the UIC will focus on data analysis to help with strategic decision-making on future plans. Early analysis suggests that one of the biggest areas of risk comes from third parties such as level crossing users (pedestrians and vehicle users).

Occupational health: Rail is by far the transport mode that gives rise to the lowest external costs. At the same time, occupational health issues are also a high priority. Here, issues such as levels of tolerance of alcohol and drugs are the subject of work by the UIC Safety Platform, which is developing guidelines in the area.

Employment and training: Railways recognise their social responsibility to employees, and focus on issues like fair income and a good working environment; the right to take part in worker unions; and health and social security systems connected to the

¹ <http://www.railpassenger.info/>

workplace. The UIC has established the International Railway Strategic Management Institute (IRSMI) to develop new training solutions designed to enable all railway companies to successfully navigate in their fast-changing environments. The UIC has been actively involved in the establishment of a set of training criteria for operational staff. These can be found in the soon-to-be published technical specifications for interoperability operations TSI OPE. Studies and training have been carried out to encourage more women to join the rail workforce.

HIV/AIDS: UIC is working together with African railway companies on how to handle the HIV/AIDS challenge. Conferences and workshops have been organised to define concrete actions such as access to medications, how to pay for affected families and replacement of staff. The Southern African Railways Association (SARA) is working on implementing strategies aimed at reducing the rate of HIV/AIDS infection among railway employees in the Southern African Development Community (SADC) region. Other African rail companies, like the Tanzania Railways Corporation, conduct seminars on HIV awareness for its employees. In South Africa, Transnet has partnered with other South African companies to invest in HIV vaccine research.

Economic dimension

The existence of an adequate transport infrastructure and the provision of transport services are essential for a well functioning economy, social and cultural life in a society.

Market: Worldwide passenger rail traffic is estimated at two trillion passenger-kilometres, and increased 24 per cent between 1994 and 2004. Asia counts for more than two thirds of this, with Africa and America together representing less than three per cent each. In terms of future trends, passenger traffic is growing rapidly in Asia (+9.3 per cent from 2003 to 2004); is stagnant in Europe, and is decreasing in America and Africa. Worldwide rail freight traffic was estimated at 7.8 trillion tonnes-kilometres in 2004, and has grown roughly 40 per cent in the last decade. America, Asia and Europe each represent about one third of the worldwide freight traffic. Since 2003, freight carriage was constant in Europe and Africa, and increased in America (+7.4 per cent) and in Asia (+9.8 per cent).

Internalisation of external costs: The market alone can solve the sustainability challenges of the transport sector. In order for the market to reflect the true costs of transport, the polluter pays principle has to be integrated and the external costs have to be internalised. Rail, which offers a form of mobility that produces far less external cost than those of other trans-

port modes, needs to be given greater recognition and support. Switzerland provides an example of how various economic instruments (taxation, subsidies, investment, land management, etc.) can be used successfully to build efficient railways. Freight transport has achieved a market share of around 33 per cent. With heavier road taxation and the development of "heavy goods vehicle railway services," especially in sensitive zones such as the Alps, the objective is to halve road transit traffic through Switzerland and reduce the CO₂ emissions by 10 per cent by the year 2010

Infrastructure: One of the biggest bottlenecks for the rail sector is the lack of rail infrastructure. On the world level, UIC is participating in the planning and activities associated with the construction of three large continent-linking freight corridors, such as the east-west inter-modal transport route (N.E.W. – Northern East West Freight Corridor) connecting the NAEC and Central Asia via the Atlantic Ocean, inter-modal ports in northern Norway and railway to Eastern Europe and Asia. In addition to the environmental advantages, the new freight corridors offer a major contribution to sustainable transportation as it supports inter-operability on a global scale. The corridors will bring alternatives to air cargo and support to regional development in the form of more business activities to the affected stations, ports, regions and cities. Rail freight transportation is also a safe alternative to road cargo. In Europe UIC, together with others from the Community of European Railway and Infrastructure Companies (CER),² the European Rail Infrastructure Managers (EIM)³ and other rail associations, are supporting the activities connected to the construction of the Trans-European Networks (TENs).⁴ UIC is also very active in the introduction of the major traffic control system called ERTMS⁵ which is a key instrument to achieve inter-operability.

Environmental dimension

Data: Collection of environmental data on a global level is still of the highest priority. This is now made easier by the fact that all major railways are producing environment and/or sustainability reports. However, it is still a challenge to provide aggregated data on a global level, for example, on emissions from railways as the methods and indicators still differ. Many railway companies have environmental management systems in place based on the ISO 14001 or EMAS standard. There is ongoing work on definition and development of specific environmental railway indicators,

² <http://www.cer.be>

³ <http://www.eimrail.org>

⁴ http://europa.eu.int/comm/ten/index_en.html

⁵ <http://www.ertms.com/>

as well as developing and harmonising data selection. This work is resulting in a UIC Environmental Indicator Leaflet⁶ with selected key performance indicators accompanied by a more comprehensive UIC Environmental Indicator Guideline, including more indicators. The next step is to develop sustainability indicators for the rail sector and thus UIC is participating in the Logistics and Transportation Corporate Citizenship Initiative's ongoing work to develop of a Global Reporting Initiative (GRI) Sector Supplement for the logistics and transportation sector.

Rolling stock: In rolling stock the major improvements are focussing on the design of trains, how to increase energy efficiency and how to reducing noise and emissions. Finalised in 2005, the PROSPER project ("Procedures for Rolling Stock Procurement with Environmental Requirements") was set up by UIC to define a set of harmonised environmental specifications for use in rolling stock procurement. Based on a life-cycle approach, these guidelines will help ensure that the rolling stock designed and purchased in the next years will be more energy-efficient and offer a more sustainable performance.⁷

Energy and the climate change: Energy has become significantly more important for the rail sector due both to concerns about climate change and rising energy costs. Under the UIC-led Energy Efficiency Technologies for Railways (EVENT) project, all technologies which can contribute to improving the energy efficiency of railways were brought together and assessed for their potential to reduce energy consumption. The evaluations and results are published in an internet database (<http://www.railway-energy.org>). Through a project called "EnergieSparen" (Save Energy), the German Railways has shown how railway companies can reduce their energy consumption by training drivers to operate trains in a more energy-efficient way. From 2002 to 2003, more than 14,000 drivers were trained and in 2003, initial measurements showed a saving in energy consumption of at least 8 million Euro. Many rail companies are now following this example. "Railenergy," a research project co-funded by EU, will help the railway sector to find best-performing technologies to further reduce overall energy consumption. A target of at least six per cent has been set for the next 15 years. Together with UITP and European association for the railway supply industry (UNIFE)⁸, UIC have been present at the latest meetings of the United Nations Framework Convention for Climate Change, and promoted the campaign "Keep Kyoto on track" to draw attention to rail transport's role in the climate change debate and in achieving sustainable transport systems.

Exhaust emissions: Despite contributing a relatively small share of overall exhaust emissions, railways are making concrete efforts to improve the

emissions from diesel-powered locomotives and vehicles. Through the UIC Diesel Action Plan, the existing European diesel fleet has been mapped and concrete actions on how to reduce diesel exhaust emissions have been defined. New lower emissions limits are being introduced to ensure the migration of on-road emission control technologies to the larger rail engines. UIC has financed a first "Rail Diesel Study" (2005–2006) where all possible means of reducing diesel emissions have been investigated and analysed from a cost-benefit perspective. (All worldwide railway companies are committing themselves to a specific and global reduction via national legislation. Europe and North America are especially active to push emissions reduction from diesel rail operations.

Noise: Noise from the railways is perceived as less disturbing than that from either road or air transport.⁹ Nonetheless, railways are continuing efforts to reduce their noise emissions. Priority has been given to research and innovation for measures at the source. This is more efficient than the use of noise barriers, and lowers the noise level during all operations of the engine. Under the umbrella of UIC, new braking systems for freight wagons have been invented and tested. In 2005, these "composite brakes" were officially recommended by UIC. Their noise reduction benefit compared to the commonly used cast-iron brakes is in the 8-10 dB(A) range. A retrofitting programme for wagon fleets has been started.

Land use and rail infrastructure: From the perspective of spatial efficiency, rail offers the least harmful of surface transport solutions. This is particularly important in urban and densely populated areas. The transport of 50,000 people per hour along the same routes requires a 175 metre wide road for cars, a 35 metre wide road for coaches and a nine metre wide rail network for a train. During the building of the TGV East, linking France and Eastern Europe, several actions were taken to minimise the harm caused to natural habitats. Precautions included tunnels and bridges to link these "small societies." The UIC Leaflet on Vegetation Control has been developed and launched to support UIC members in removing vegetation along the tracks with environmental friendly methods.

6 UIC leaflet is a railway technical reference documents with specifications and recommendations aimed to harmonise the global rail performance.

7 For more, please see <http://www.railway-procurement.org>

8 <http://www.unife.org>

9 European Directive (2002/49) on Environmental Noise.

Future challenges

What we said in 2002: meeting technical and organisational obstacles and uneven playing field in order to meet future modal shift in favour of rail; continued research to maintain and develop environmental and social advantages; sustainable urban planning with rail as backbone for infrastructure in developing countries...

Action to build a political consensus in support of improved rail and public transportation infrastructure and policies is required. This calls for a level playing field among the transport modes concerning infrastructure charges, internalisation of external costs, investment in rail infrastructure and appropriate conditions for deregulation of the rail sector worldwide, taking into account their potential to provide low-cost, high access, mobility and freight, and to reduce emissions of greenhouse gases and other pollutants. A greater awareness of sustainability issues among people (passengers) and companies (passenger/freight) would give stronger incentive for the modal shift that is required.

Partnership opportunities

1. The rail sector sees a great need for a meeting place or a forum hosting constructive dialogues on development of and co-operation on sustainable transport systems for the different transport modes and stakeholders. This forum could start as a joint effort between the United Nations Environment Programme (UNEP), UITP and UNIFE to promote sustainable mobility. One aim of this forum could be to develop sustainable

mobility further into a leading issue with the UN. A concrete task could be to develop a common set of joint sustainability indicators for the transport sector as tools to support and refine the transport market's responsibility for sustainable development. Sustainable mobility incorporates a mix of measures far wider than technological improvements alone; it is planning a sound combination of measures where the advantages of each transport mode are exploited in one joint transport system. A cross-sectoral approach is needed to address all issues connected to all three aspects of sustainability.

2. Others topics that the rail sector would like to see intensively discussed with UNEP and other stakeholders are:
 - a) Social aspects: contribution of railways to welfare of society (employment, investment).
 - b) Rail transport as a cornerstone of sustainable (trans-modal) mobility.
 - c) External costs: economic savings for society.

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REPORT CARD: Road Transport

Introduction

The International Road Transport Union (IRU) is an association of national road transport associations, comprising 180 members in 70 countries. The IRU includes both carriers of passenger and of freight. It speaks for the operators of buses, coaches, taxis and trucks, from large transport fleets to small family companies.

Road transport carries more than 70 per cent of goods by volume and more than 90 per cent by value. Road transport is not the problem; it is the solution. The challenge is to make it compatible with sustainable development—the policy goal adopted by the United Nations as part of the Agenda 21.

Work in progress

What we said in 2002: following our three-pronged strategy of innovation (at source measures to improve environmental performance), incentives (government incentives to reward best industry practices) and infrastructure (more investment in road infrastructure, a key condition for sustainable development)...

The IRU has made working towards sustainable development a constitutional obligation. To date, the road transport industry is the only transport mode that has committed itself to the goal of sustainable development. The critical success factors for achieving sustainable development follow the IRU three “i” strategy for sustainable development:

- *Innovation:* at source measures are the most effective to reduce the environmental impacts of road transport
- *Incentives:* governments need to provide real business incentives to encourage faster introduction of best available technology and practices by the transport operators before they are legally required to do so.

- *Infrastructure:* without free flowing traffic, all innovative measures have little effect. Adequate investments are needed in new infrastructure in order to remove bottlenecks and missing transport links. And full use of existing infrastructure is essential.

Best Industry Practices Reports: Two “Reports on Best Industry Practices” have been developed since 2002, both of which have been based on the three “i” strategy and adopt a bottom-up rather than a top-down approach. The objective of the reports is to demonstrate progress in the implementation of sustainable development practices and to confirm that best practices are profitable (i.e. sustainability = profitability). Furthermore the reports encouraged transport operators to imitate best practices and “learn from the best.” The IRU is currently collecting examples for a third report.

Road Safety: One of the key issues in the road transport sector’s pursuit of sustainable development is the cost and social aspects of road safety. In this context, the IRU favours all measures that improve road safety if they are cost-effective. However, to target road safety problems it is first necessary to identify the main cause of an accident. Therefore the IRU and the European Commission initiated a scientific pilot study, ETAC (European Truck Accident Causation), analysing several hundred accidents involving commercial vehicles. A scientific, commonly accepted and internationally benchmarked methodology for accident causation research has been developed and the accident collection and analysis is ongoing.

The IRU and its member associations also signed the “IRU Road Safety Charter” which is currently in the process of implementation. The “IRU Road Safety Charter” includes a list of road safety instruments like the IRU Taxi, Coach and Truck Driver Checklists. These checklists provides easy-to-understand, easy-to-follow guidance on how to prepare for and conduct a safe trip. The checklists have been translated into 18 languages and 50,000 copies have been distributed in 24 countries. This is an ongoing process, and implementation continues.

Road transport and security: Road safety and anti-terrorist/anti-criminal security performance of the

transport system are closely linked. Security aspects of the supply chain are becoming more and more an integral part of road transport. In response to this challenge, the road transport sector has drafted security guidelines that are in the process of implementation. However, all security efforts should be applied in a balanced and harmonised way with due consideration to cost implications for the society.

Future challenges

What we said in 2002: increase in energy consumption and CO₂ emissions; persuading governments to provide incentives to accelerate penetration of best industry practices and technology...

Incentives for road transport/clean vehicles: The biggest challenge for sustainable development in road transport is the lack of real business incentives for transport operators to adopt best available technology and practices before they are legally required to do so. This relates especially to incentives for vehicles with lower fuel consumption and consequent lower greenhouse gas emissions. The IRU undertook a study on incentives in road transport, evaluating the prerequisites for implementing business incentives and evaluating the effects of incentives. The study concluded that the role of governments is crucial. Furthermore, while governments can choose from a range of monetary and non-monetary incentives, incentives are only effective if: the financial benefit outweighs the required investments; the incentives are in place long enough; and the incentives target the broad road transport market.

The study showed that governments are still not making use of this effective tool to strive for sustainable development. The authorities still need to take responsibility for encouraging the faster introduction of cleaner and safer vehicles in a harmonised and coordinated manner.

Road Transport and Oil: In an increasingly competitive and globalised economy, road transport has become a vital production tool and thus the engine of economic development. While providing this irreplaceable service, it must be recognised that commercial road transport is 100 per cent dependent on oil, both in the short and long term. No other fuel is economically viable. The comparison of weight vs. volume coefficient of various fuels shows that alternative fuels (e.g. hydrogen, propane and ethanol) require a much heavier and larger tank than the diesel

tank currently used on trucks. This additional weight would then have to be carried by the commercial vehicles, reducing significantly the remaining load capacity and reducing overall efficiency.

Despite the fact that road transport is, and will remain, 100 per cent dependent on oil, a large proportion of oil supplies is allocated to the production of electricity. This electricity could be generated just as economically by making use of other sources of energy that are far more abundant than oil. In addition, fixed installations like power plants do not have the same technical limitations as it is the case for mobile applications: the required technical changes at fixed installations could be relatively easily implemented.

The road transport industry has accepted its responsibility to promote sustainable development and has invested heavily into vehicles reflecting the latest technology. As a result, fuel consumption has been reduced considerably from 50 litres/100km in 1970 to 32 litres/100km today. Irrespective of this positive development, the road transport industry is financially penalised in industrialised countries by paying annual diesel fuel tax charges of 15,000–20,000 Euro per truck.

This fuel taxation consists of excise duties and VAT, which constitute up to 70 per cent of the fuel price and which is allocated to general budgetary purposes and cross subsidisation of less efficient transport modes. A closer look at the international oil market suggests that:

- the high spot price is not established by oil producing countries, but is a result of speculation by brokers and multinational oil companies;
- the spot price covers less than 10 per cent of the oil purchase on the oil market; and
- the spot price does not correspond with long-term contracts with oil producing countries.

These three factors have led to a severe increase in fuel prices and a considerable tightening of the oil market. This shortage encourages even further speculation, which leads again to a further increase in storage, meaning that the road transport industry is penalised twice because it has no storage capacity and it has no economically viable alternative to oil.

A sustainable energy policy must ensure that our children's children can still benefit from oil. Since road transport has no economically viable alternative to diesel fuel, oil should be reserved for road transport. To ensure that best use is made of oil, governments should:

- diversify use of energy sources where alternatives to oil exist by increasing taxes on oil for heating, electricity, steel, cement and paper production;
- reduce taxes on oil and diesel fuel where there are no viable alternatives, as is the case in road transport;
- harmonise taxes on commercial fuel use in countries that belong to the same economic region;
- increase taxes on profits from oil speculation; and
- stabilise fuel prices through variable taxation, depending on the price of oil.

In addition, multinational oil companies should not systematically apply the high spot price at all their petrol stations in a co-ordinated way.

Partnership opportunities

The IRU is working closely with stakeholders involved in the road transport sector on a number of issues.

In relation to oil, the IRU is working with the European Conference of Ministers of Transport (ECMT); the United Nations Economic Commission for Europe (UNECE); the International Energy Agency (IEA); and the Organization of Petroleum Exporting Countries (OPEC) to communicate the above-mentioned common concern. Additional partners are welcome to contribute to this process.

As a Board member of the Global Road Safety Partnership (GRSP), the IRU is working with international road safety organisations and business representatives. The IRU was, for example, the official partner for the Scania Truck Driver Award, in which more than 13,000 drivers competed before reaching the final round in Stockholm.

At each of its world congresses, the IRU also presents the IRU Grand Prix D'Honneur to a driver who, through his moral and professional qualities while on the job, has performed an exceptional act of bravery and saved lives.

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REPORT CARD: Waste Management

Introduction

This report has been produced by the International Solid Waste Association (ISWA), an independent and non-profit association working in the public interest to promote and develop sustainable waste management worldwide. ISWA is open to individuals and organisations from the scientific community, public institutions, public and private companies, consultants and manufacturers from all over the world working in the field, and interested in waste management.

ISWA has around 1,100 members from more than 70 countries around the world. ISWA is the only worldwide association promoting sustainable and professional waste management.

Work in progress

What we said in 2002: integrated research on effects of waste management on soil, air, water and climate; improved waste management in developing countries...

The waste industry has made great progress over the last 10 years. But while an increasing number of developing countries are concerned with sustainable waste management, interest in waste management issues around the world is by no means uniform.

Significant progress has been made at:

General strategic level: Most developed countries have adopted waste management policies, plans and measures to achieve objectives and targets at national and local levels. At the international level, laws have been adopted to regulate the export and import of hazardous waste. Political awareness is high, but waste policies at national and regional levels still have to be made more consistent and coherent. The legal framework and its implementation and enforcement need to be improved.

Technical level: The waste industry has shown improved environmental and technical performance. Different decision-making tools have been developed for environmental policy-makers, such as environmental impact assessment, cost-benefit analysis, life cycle analysis and material flow analysis. This has

helped to encourage scientifically based decision-making. The key priorities for waste management, and the most efficient measures with the biggest possible benefit for the environment, have to be identified on the basis of facts and figures. There is a need for research in the field of resource management and waste management, as well as continuous monitoring of the effects of waste management on soil, air, water and climate.

Waste management in developing countries remains an issue of concern for the industry. It is often either non-existent or unsatisfactory. Any measure taken will be a great improvement to public health and for environmental protection.

Future challenges

What we said in 2002: decouple the link between economic growth and waste generation; improve communication, education and training...

Even if the environmental performance of different waste treatment methods has improved, there is still a need for considerable investment in emerging technologies and support should be given to research and development.

The de-coupling of the link between economic growth and waste generation remains an important objective to attain for the industry. To achieve this, decisions on waste prevention and minimisation must be taken at the conception stage of a product and not when entering a waste management facility. A change is needed to consider overall resource management. The waste industry can play an important role with its knowledge and experience in handling waste material.

The improvement of communication, education and training can all be seen as preventive measures with many benefits: improved environmental performance; higher standards in the waste industry; prevention and minimised waste generation; and improved public perception and confidence. The emotive views of the public in relation to waste management facilities must be replaced with views based on sound science and agreed facts. Improving the standards of

waste management will have great effects on environmental protection and will also improve its public image. Only well-trained, highly qualified professional waste managers can understand the effects of poor operations and misguided policies on the environment, and can thus lead the efforts to achieve change. In 2002, ISWA began to establish guidelines for professional qualifications. The ISWA professional qualification scheme was launched in September 2005. ISWA will work to enhance the international recognition of its certification scheme and will run training courses on different waste management issues.

People also have to become more aware of their responsibility for the waste they produce. At the same time, consumers need to be given alternatives to make lifestyle changes towards more sustainable practices. Communication and social issues have become very important for the waste industry but there is still a challenge to raise awareness and promote public participation.

First steps for developing countries are to provide sufficient collection services to as large a part of the world's population as possible, and to raise the quality of landfills. Support and knowledge transfer to developing countries are most valuable in the implementation of sound waste management strategies and practices. Developing countries need appropriate technologies and management approaches compatible with their specific local demands, requirements, capabilities and resources. ISWA has changed its organisational structure to better serve its developing country members and to help to solve their problems more locally. Regional Development Networks (RDNs) have been established that can arrange events—such as training courses and workshops—to meet the needs of the region.

Partnership opportunities

ISWA is working continuously to transfer knowledge and exchange experiences through strategic partnerships among its members and other organisations. ISWA runs a number of training courses and workshops on different waste management issues. The establishment of the ISWA RDNs facilitates organisation of training adapted to local and regional needs. ISWA is encouraging its members and the whole of the waste industry to contribute to the following specific tasks:

- ISWA is considering the development of an international code of conduct for the waste industry. The work has been initiated within one of the internal working groups of ISWA. Such a voluntary initiative launched by ISWA and the waste industry would also include such aspects as education, training and professional qualifications.
- Further promote the ISWA's certification programme on professional qualifications for the International Waste Manager (IWM), which was launched in September 2005. The project has attracted considerable attention and ISWA is now continuing to inform potential participants about its programme for professional qualifications.
- With regard to waste prevention, minimisation and rendering waste less hazardous, ISWA is open to dialogue and exchange with industry generally to promote a greater level of awareness. Increased use of LCA and design for the environment within product design, development and production will encourage the consideration of waste management throughout the life cycle of a product instead of making it an end-of-pipe matter.
- Communication is an important element for an effective and successful implementation of any waste strategy. ISWA is drawing upon the experience and knowledge of its members all around the world to produce guidelines for effective communication to promote sustainable waste management worldwide.

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MANUFACTURING

The Report Cards in this chapter have been prepared by the respective business and industry groups, who assume full responsibility for the contents thereof.



REPORT CARD: Aluminium

Introduction

Aluminium has only been produced commercially for around 150 years. Humankind has been using copper, lead and tin for thousands of years and yet today more aluminium is produced than all other non-ferrous metals combined. Two to three tonnes of bauxite are required to produce one tonne of alumina and two tonnes of alumina are required to produce one tonne of aluminium metal. Annual primary production in 2004 was about 30 million tonnes and aluminium production from recycled sources was some 15 million tonnes. International Aluminium Institute (IAI) member companies represent around 70 per cent of the world's production of primary aluminium, and 20 per cent of recycled aluminium production. The industry employs around one million people directly in the production of the metal and provides employment for four million more indirectly in the manufacture of its products. This does not take into account employment in related user industries such as civil aviation and tourism.

Work in progress

What we said in 2002: life cycle analysis of the effects of aluminium production and its key applications; reduction in greenhouse gas emissions (e.g. perfluorocarbon / PFC emissions); benchmarking data on safety performance ...

The 2002 Aluminium Industry UNEP Report confirmed that the industry understood the relevance of sustainability issues and was taking active steps to improve its performance. However, it was suggested that the industry develop clearer goals. In 2003 the industry sought to address this deficiency by launching the *Aluminium for Future Generations* global sustainable development programme. The programme involves time-specific voluntary objectives, performance indicators and annual public reporting in accordance with the OECD model. The industry is also currently discussing the development of a Global Sustainability Roadmap.

The *Aluminium for Future Generations* initiative reflects the recognition by the 27 IAI member companies—collectively responsible for more than 70 per cent of world primary aluminium production (including the major Russian and Chinese producers)—that governments and communities need to know how the production of this essential metal affects their social, environmental and economic development. This global sectoral approach provides a route towards a future in which the use of resources and environmental impacts are managed on a long-term global basis.

Twelve voluntary objectives, supported by 22 tracking indicators, are designed to promote continual improvement in sustainability performance. The programme is a collective commitment to improve average performance. To ensure progress towards the objectives, the IAI surveys production plants and benchmarks annual performance. The IAI also provides, where needed, consultants to work with individual companies to promote the spread of best practice globally. The results of the 2004 survey are set out below against the 12 voluntary objectives.

- *An 80 per cent reduction in perfluorocarbon (PFC) greenhouse gas emissions per tonne of aluminium produced for the Industry as a whole by 2010 vs 1990 levels.* PFC emissions per tonne of aluminium produced were reduced by 74 per cent between 1990 and 2004. This represents a reduction equivalent to around three tonnes of CO₂ per tonne of aluminium produced.
- *A minimum of a 33 per cent reduction in fluoride emissions by IAI member companies per tonne of aluminium produced by 2010 vs 1990.* Fluoride-specific emissions to the atmosphere were reduced by 63 per cent between 1990 and 2004. The Voluntary Objective is scheduled for review in the light of these results.
- *A 10 per cent reduction in average smelting energy usage by IAI member companies per tonne of aluminium produced by 2010 vs 1990.* The average electric energy used for electrolysis was cut by five per cent between 1990 and 2004.

- *A 50 per cent reduction in the Lost Time Accident Rate and Recordable Accident Rate by 2010 vs 2000 by IAI member companies, with a review of the 50 per cent target in 2006.* The Recordable Accident Rate at IAI member company plants (mines, refineries and smelters) was reduced by 60 per cent between 2000 and 2004. The Lost Time Accident Rate was reduced by 55 per cent over the same period. This Voluntary Objective is also scheduled for review in the light of these results.
- *Implementation of Management Systems for Environment (including ISO 14000 or equivalent certification) and for Health and Safety in 95 per cent of IAI member companies' plants by 2010.* Systems are in place at the majority of Member company plants: 78 per cent of smelters; 83 per cent of refineries; and 91 per cent of mines have such formal and documented systems, while ISO 14000 or equivalent certification has been obtained at a similarly high number of facilities.
- *Implementation of an Employee Exposure Assessment and Medical Surveillance Programme in 95 per cent of IAI member companies' plants by 2010.* Employee exposure assessment and medical surveillance programmes are in place at 92 per cent of IAI member company plants (mines, refineries and smelters). A detailed industry-wide definition of the criteria required to meet this Voluntary Objective has been developed and shared among IAI member companies. This document provides the basis for the development of exposure assessment and medical surveillance programmes at those plants that do not already have such systems in place.
- *(Updated in 2005) The IAI has developed a material resource massflow computer model to identify future recycling flows. The model projects that global recycled metal supply (back to the industry) from post-consumer scrap will double by 2020 from today's (2004) level of 6.7 million tonnes. The industry will report annually on its global recycling performance.* IAI member companies represent around 20 per cent of the world's production of recycled aluminium. During 2003–2004 they collectively increased recycled output by four per cent. In Europe, the production of aluminium metal from used products has been growing by an average of four per cent annually over the past 22 years.
- *The industry will annually monitor aluminium shipments for use in transport in order to track aluminium's contribution through light-weighting to reducing greenhouse gas (GHG) emissions from*

road, rail and sea transport. Aluminium shipments to the automotive and light truck industry increased by 6.4 per cent between 2002 and 2004. The volume of aluminium used in car production is constantly increasing, up from an average of 61 kg per vehicle in 1990 to 102 kg in 2000. In motor vehicles, the lower weight and superior performance of aluminium components help to reduce fuel consumption and emissions without compromising safety.

- *(New in 2006) The IAI member companies will seek to reduce their fresh water consumption per tonne of aluminium and per tonne of alumina produced and will report annually on progress. IAI member companies will concentrate efforts to minimise fresh water consumption where there are limited available fresh water resources.* IAI member companies are committed to reducing their fresh water consumption in high water stress areas. The IAI is collecting data on fresh water consumption to track facilities' performance.
- *(New in 2006) The IAI member companies will seek to reduce GHG emissions from the production of alumina per tonne of alumina produced.*
- *(New in 2006) IAI member companies will seek to continue to increase the proportion of bauxite mining land rehabilitated annually; the IAI will report annually on the proportion of area rehabilitated to area mined.* Globally, bauxite mining disturbs approximately 25 km² a year, an area equivalent in size to one third of Manhattan Island, NY. Every year around 20 km² is rehabilitated. While the annual area mined increased by 25 per cent between 1998 and 2002, the area rehabilitated increased by 33 per cent over the same period.

Future challenges

What we said in 2002: involving Chinese and Russian producers to engage majority of the world's primary aluminium production; introduction of inert anodes and replacement of carbon anodes to reduce pollution; fair distribution of resource utilisation between generations and increasing global recycling rates...

Greenhouse Gases: The reduction of the sector's climate change impact is fundamental to the sustainability of the industry. The industry has identified the following four key responses to the challenges of climate change:

1. Reducing perfluorocarbon (PFC) emissions per tonne of primary metal produced through:
 - a. investment in new technologies; and
 - b. progress towards good operating practices.
2. Improving energy efficiency in the production of aluminium.
3. Maximising potential GHG savings through aluminium recycling;
4. Encouraging applications of aluminium, which reduce weight and GHG emissions in transport, a sector which is responsible for a third of GHG emissions globally.

The 74 per cent reduction in PFC emissions intensity and five per cent fall in smelting energy outlined above are due both to the spread of good operating priorities and significant investment in new technology.

Recycling: Because aluminium can be profitably recycled many times, the estimated 540 million tonnes of aluminium already in circulation represents a long-term asset for society. Aluminium recycling benefits present and future generations by conserving energy and avoiding corresponding emissions. Recycling saves up to 95 per cent of the energy required for the production of primary aluminium from bauxite. The high value of aluminium is a key incentive and major economic impetus for recycling. Global aluminium recycling rates are high, approximately 90 per cent for transport and construction applications and around 60 per cent for beverage cans. The ratio of global recycled metal tonnage to total industry product shipments increased from 17 per cent in 1960 to 33 per cent in 2000 and is projected to increase to around 40 per cent by 2020.

Transport Lightweighting: Life cycle analyses have demonstrated that every additional kilogram of aluminium used to replace heavier materials in passenger cars results in savings of 20 kg of CO₂ emissions over the lifetime of the average vehicle. Data on aluminium shipments to the automotive and light truck industry, recycling and GHG emissions intensity are input to the Sustainability Model to produce projections of the potential impact of the industry on global greenhouse gas emissions. By bringing all primary and recycling operations up to today's best practices, the industry

has the potential to stabilise global emissions from aluminium production while continuing to grow. When greenhouse gas savings from transport applications are factored in, there is the potential for greenhouse gas savings from the use of aluminium to outweigh emissions from its production by 2020.

Partnership opportunities

Rigorous and comparable measurement and reporting of emissions are key steps towards reducing the climate change impact and ensuring the sustainable development of the industry. The industry is providing input to the 2006 UN Intergovernmental Panel on Climate Change (IPCC) Guidelines for National GHG Inventories and is revising its GHG Protocol (an addendum to the WRI/WBCSD GHG Protocol) and PFC Measurement Protocol (in association with USEPA) in order to harmonise emissions measurement and reporting practice.

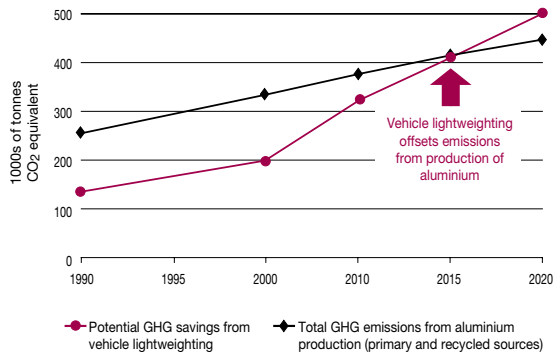
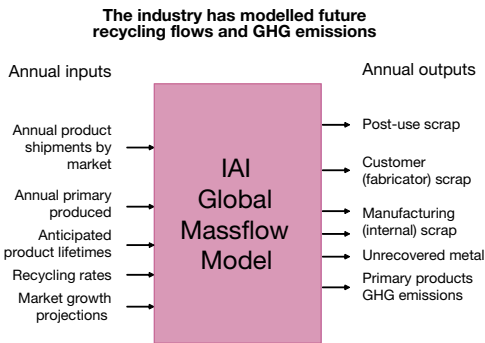
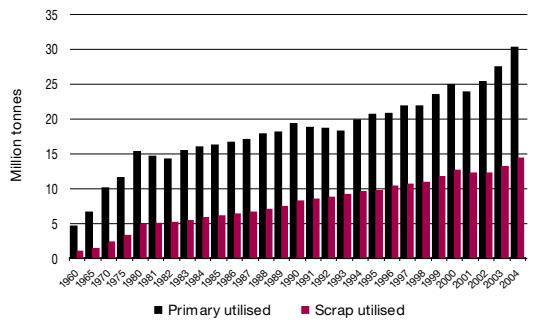
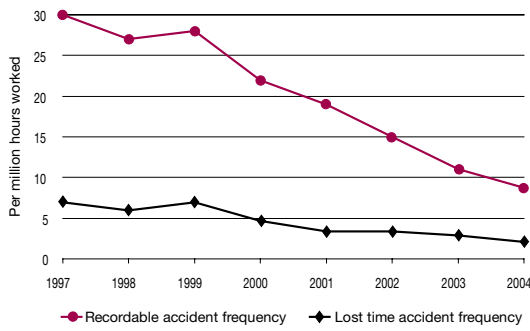
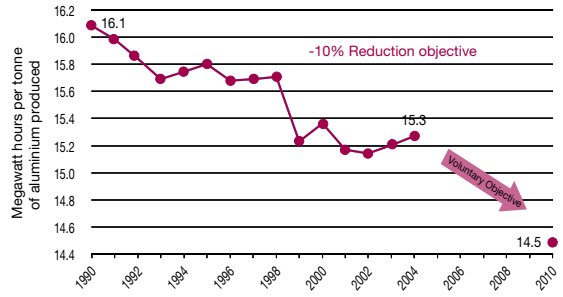
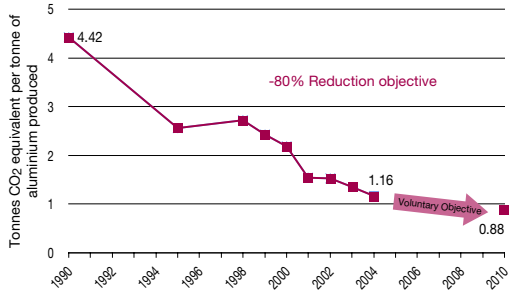
The industry is in dialogue with the OECD, the IEA and the IPCC regarding both the Massflow Model's inputs and projections and the global aluminium industry sector sustainability programme. Other partnerships on modelling of aluminium massflow and recycling potentials are sought.

The Global Sustainability Roadmap will outline the industry's path to meeting its objectives to 2010 and beyond. Partnerships are sought on emissions reduction and energy efficiency through the use of aluminium products and in exploring ways in which aluminium product recycling potentials can be maximised.

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Annex – Tables and Graphs



REPORT CARD: Automotive Manufacturing

Introduction

The automotive sector is a major global industry. In 2004, it produced over 63 million vehicles, and employed over seven million people. The automotive market has undergone major changes since the sector's 2002 report. These include issues surrounding over-capacity and cost structures; a sharply competitive marketplace; rapid technological innovations; and changing consumer preferences. This report, prepared by the European Automobile Manufacturers Association (ACEA¹), represents the viewpoint of 13 major European car, truck and bus manufacturers, who collectively produce around 17 million vehicles per year and provide direct employment to two million people in the manufacturing and component sectors.

Work in progress

What we said in 2002: development of vehicles using alternative fuels to further minimise greenhouse gas and other emissions; overcoming difficulties related to fuel distribution and legal frameworks in order to introduce clean fuels more widely...

Since 2002, the automotive industry has taken a range of technological and policy steps in response to the challenge of sustainable development.

At the technology level, the following developments have been noteworthy:

- A variety of vehicles with innovative technologies or suitable for *alternative fuels* have been introduced on the market. Different propulsion systems, such as advanced internal combustion engines with direct injection, as well as internal combustion engines using bio-fuels, natural gas and others are now on the market.
- The *average fuel consumption* of the model range of the automotive industry has declined? despite an increase in safety features and customer demand for more comfort.

- The actual model range using conventional fuels has *lowered its exhaust emissions* substantially (see graphs below). The automotive manufacturers accept the challenge of a further reasonable tightening of the emission standards (EURO V).
- The difficulties related to a broader introduction of clean fuels still exist, although in certain regions the *infrastructure for natural gas and/or biofuels* has been expanded.
- There has been a significant reduction of fatal and serious injuries caused by traffic accidents over the last five to 10 years (four to five per cent per annum) despite a threefold increase in traffic volume, because of safer and more intelligent cars (passive safety, active safety, preventive safety features).

At the policy level, too, there has been progress.

- Over 30 automotive companies worldwide have introduced reporting based on the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines, including the majority of ACEA members. A GRI Sector Supplement for the automotive sector was also developed in consultation with stakeholders.
- The automotive industry supports sustainable development in its supply chain. Because of the complexity of the automobile supply chain, this challenge can only be met in co-operation with the suppliers. Many automobile manufacturers and global suppliers have already included environmental and social standards in their purchasing activities.
- The EU End of Life Vehicles (ELV) Directive became effective in 2001. Since that time, a number of sustainable developments have taken place like the establishment of an EU-wide take-back system for ELV and achievements of substantial improvements.

¹ ACEA Members are : BMW Group, DAF Trucks, DaimlerChrysler, FIAT, Ford of Europe, General Motors Europe, MAN Nutzfahrzeuge, Porsche, PSA Peugeot Citroën, Renault, Scania, Volkswagen and Volvo Trucks.

Future challenges

What we said in 2002: enhance ecological efficiency of vehicles throughout their entire life cycle, including efforts to further streamline the production process, refine and disseminate new propulsion technologies using alternative fuels, and developing new concepts for sustainable mobility...

Mobility is essential for economic and social development. Globalisation and economic growth of developing countries put challenges on the present transport system. These challenges do not only relate to the environment, but also to social and economical concerns and can only be met if all stakeholders involved in the transport system share the responsibility. Solutions for developing and developed countries have to follow an integrated policy approach to implement the most cost-efficient measures.

The automotive industry is an important partner in meeting these challenges and will contribute to the following long-term goals:

- reduction of greenhouse gas emissions from road transport following an integrated approach, which promotes action on the part of all relevant stakeholders: vehicle industry, fuel industry, politics (infrastructure, etc.) and drivers;
- introduction of innovative technologies suitable for alternative fuels like biofuels, natural gas and hydrogen;
- decreasing the number of transport-related deaths and injuries worldwide following an integrated approach to increase safety through technology measures, law enforcement, infrastructure improvements and driving behaviour;
- reduction of conventional (exhaust) emissions from transport; and
- ensuring employment and the creation of new jobs in the mobility sector.

Partnership opportunities

The automobile manufactures are open to discuss the challenges of sustainable development and mobility with their stakeholders. Dialogue and partnerships enable all stakeholders to work on solutions that reflect their shared responsibility for sustainable development within an integrated approach.

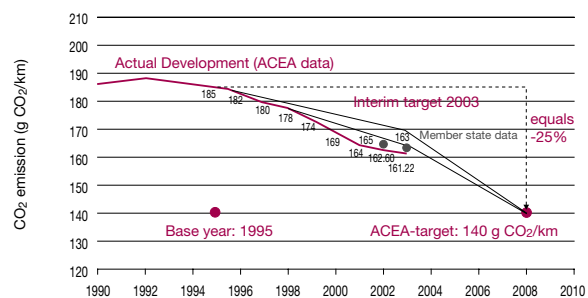
Challenges such as climate change, traffic flow in mega-cities and infrastructure for alternative energy in developing countries can only be met co-operatively, involving stakeholders and new partnerships.

Contact:

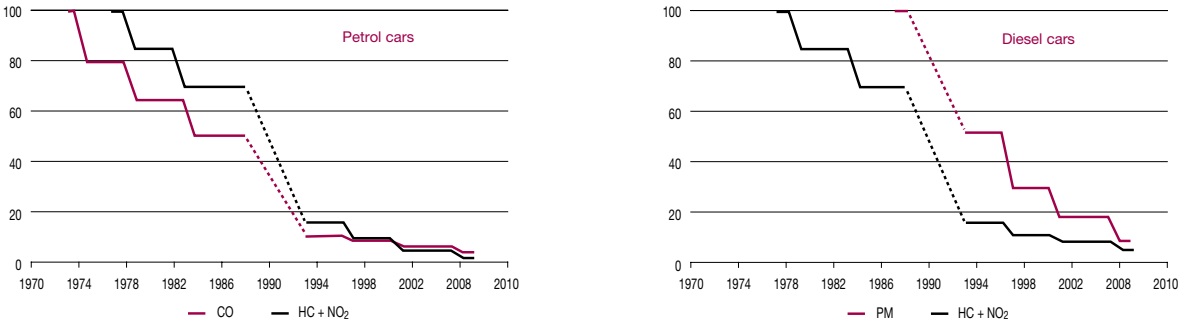
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Annex

ACEA commitment on CO₂ emissions reduction 1995 to 2008



Passenger car emissions more than 95% reduction since 1970. Evolution of exhaust emission standards (simplified representation)



Source: ACEA



REPORT CARD: Chemicals

Introduction

The International Council of Chemical Associations' (ICCA) Sectoral Report for the WSSD outlines the various initiatives the global chemical industry has undertaken, or is planning to undertake, to meet the sustainable development challenge. This report notes that both the industry itself and its stakeholders believe that the chemical industry should adopt a more visionary and ambitious programme of action, one in which stakeholders would be more actively involved.

In response to this expectation, ICCA initiated a major strategic review to re-vitalise and strengthen Responsible Care® in May 2003. The Responsible Care® Global Charter arose from this examination, and was shaped by considering the recommendations of independent stakeholders from around the world. Launched in Dubai on 5 February 2006 (<http://www.icca-at-dubai.org/>), the Charter extends and builds upon the original elements of Responsible Care®. The elements include commitment to sustainable development, effective chemical risk management and product stewardship along the supply chain, greater industry transparency, and greater global harmonisation and consistency. The Charter further expands the global chemical industry's actions to implement the environmental principles of the United Nations Global Compact.

Building on the commitment to further enhance the product stewardship efforts, the ICCA developed in 2004–2005 a Global Product Strategy (GPS), which was adopted in October 2005. This strategy is designed to improve the global chemical industry's product stewardship performance, with a special focus on working with suppliers and downstream customers of the chemical industry (the "value chain"). The GPS includes a framework of nine specific elements (<http://www.icca-at-dubai.org/index.php?section=2&pagelid=13>), whose implementation will be supported by a management system approach, as well as a plan for stepwise implementation and reporting on progress.

Work in progress

What we said in 2002: Develop improved assurance process for Responsible Care®

ICCA Response: The new ICCA Responsible Care® Global Charter establishes a commitment to an enhanced, transparent and effective global governance process to ensure accountability in the collective implementation of Responsible Care®. The governance process will incorporate such issues as tracking and communicating performance commitments; defining and monitoring the implementation of Responsible Care® obligations. Moreover, a number of concrete measures are included to improve the assurance process such as a management systems approach to implement Responsible Care® commitments by the companies.

What we said in 2002: Provide more understanding and information of chemicals and their potential effects

ICCA Response: In 1998, ICCA launched a global initiative aimed at data gathering and initial hazard assessment for 1,000 high production volume (HPV) chemicals. The initiative is a joint programme between ICCA member federations and their corporate members, the OECD and member countries. In the HPV programme more than 300 companies are working together. They share health, environmental and safety data and information assess the hazard of chemicals and engage in a "peer review" of their assessments with governments experts from OECD member countries and a NGO. In addition to this global initiative, some national federations in the U.S., Europe and Japan have voluntary chemicals programmes in place. OECD assessments are posted on the ICCA Web site <http://www.iccahpv.com> as well as the OECD site <http://cs3-hq.oecd.org/script/hpv>.

Through the Long-Range Research Initiative (LRI) (<http://www.icca-chem.org/section02c.html>), the chemical industry sponsors publicly available research that increases scientific knowledge of the potential impacts that chemicals may have on human

health, wildlife and the environment. Such knowledge will help governments make risk assessment judgments on the potential impacts of chemicals, and increase certainty about those impacts for the public and chemical manufacturers.

What we said in 2002: Extend Responsible Care® to all countries that manufacture chemicals (Russian Federation, China, Saudi Arabia and some emerging European Economies)

ICCA Response: Fifteen years ago, just a handful of countries had launched Responsible Care® programmes, but by 2002 it had been adopted in 47 countries around the world. In 2004, we welcomed five new member countries from Eastern Europe: Bulgaria, Estonia, Latvia, Lithuania and Slovenia. Moreover, the outreach to new observer members, such as China and other Asian countries, will help to further establish Responsible Care® in this important region.

Future challenges

The global chemical industry supports the Action Plan on chemicals agreed by Heads of State at the World Summit on Sustainable Development. This plan provides that, “by 2020, chemicals be used and produced in ways that lead to minimisation of significant adverse effects on human health and the environment based on sound science, risk assessment, and risk management, following the precautionary approach as set out in the Rio agreement.” ICCA therefore welcomed the endorsement of the UNEP Strategic Approach to International Chemicals Management (SAICM) Dubai Declaration. SAICM will provide the framework for future international chemical management arrangements and will strongly influence the direction of national regulatory systems from now until 2020. The chemical industry sees the Responsible Care® Global Charter and the Global Product Strategy as the cornerstones of its contribution to activities implementing SAICM. As a clear signal for its strong commitment ICCA publicly launched both initiatives at a side-event during the International Conference on Chemicals Management (ICCM) in Dubai on 5 February 2006.

What we said in 2002: Build capacity in developing countries (in partnership with intergovernmental organisations, governments and societal actors)

ICCA Response: ICCA recognises that the challenges of SAICM cannot be met without a concerted

effort from all stakeholders to build the necessary capacity in all countries. ICCA therefore highly welcomes the open, transparent and inclusive multi-stakeholder and multi-sectoral participation in developing and implementing the SAICM. A successful SAICM must provide a way to bridge the gap in chemicals management between developed and developing countries. Capacity building should comprise the following key elements:

- ensuring that the necessary infrastructure is in place;
- promoting and supporting education and training in the relevant areas; and
- support for the use of appropriate technologies to handle chemicals safely.

The chemical industry is further developing and implementing its Capacity Building Action Plan. ICCA will continue to provide financial and in-kind resources for capacity building activities nationally and internationally. ICCA member companies, through Responsible Care®, are committed to produce and handle chemicals in countries where they are operating by using best available technologies and best environmental practices, providing technology support and innovative products. ICCA will also continue to support capacity building activities of intergovernmental organisations, such as UNEP, UNITAR and others.

What we said in 2002: Enhance internal and external communication with stakeholders

ICCA Response: Stakeholder involvement is a key element of Responsible Care®. Therefore, as part of the global review, an independent study of external stakeholder expectations was commissioned and undertaken by the global consulting firm SustainAbility (for details see the Annex). The new Responsible Care® Global Charter addresses stakeholder expectations about the chemical industry’s activities and products. The global chemical industry will extend existing local, national and global dialogue processes to enable the industry to address the concerns and expectations of external stakeholders to aid in the continuing development of Responsible Care®. In addition, there is ongoing outreach with stakeholders at local, national and regional levels.

What we said in 2002: Develop and implement a core set of quantitative indicators of performance towards achievement of sustainable development

ICCA Response: In order to monitor, benchmark and communicate the achievements of the chemical industry at local, national, regional and global levels, the chemical industry needs a comprehensive assessment of its health, safety and environment performance, based upon common definitions. Over the years, ICCA has developed a core set of quantitative indicators of performance, gradually introducing further parameters. The Responsible Care® Status Report 2002 included first elements of an ICCA Performance Reporting.

The recently published ICCA Responsible Care Progress Report 1985–2005 presents a more comprehensive reporting including a number of additional parameters. It should be noted, however, that the data presented are still somewhat fragmented. Also, although we have improved on achieving common definitions, it is not always possible to adapt information that is required at national level in order to conform to the units requested by ICCA under its reporting definitions. Please visit <http://www.icca-chem.org> where you can download the ICCA Responsible Care® Report 1985–2005.

Partnership opportunities

For the moment, ICCA can not yet announce new partnerships. However, ICCA intends to engage in new partnerships to further develop and implement important elements of the Global Product Strategy. Moreover, ICCA is ready to consider new partnerships to implement capacity building activities, and possibly other elements of SAICM. Also, ICCA is always open to consider partnerships proposed by other stakeholders.

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Annex

Key findings of the SustainAbility Study on Responsible Care®

For ICCA, stakeholder involvement is a key element of Responsible Care®. Therefore, as part of the

global review, an independent study of external stakeholder expectations was commissioned by industry and conducted by the global consulting firm SustainAbility.

The study consisted of in-depth interviews with senior leaders in national governments, multilateral organisations, major chemical industry customers, environmental and social activist groups and community leaders. It has been distributed to all nations participating in Responsible Care®. Generally, external stakeholders see the global chemical industry as a necessary evil. They see the industry as producing useful products, but these same products, and the process of making them, pose short-term and longer-term threats to public health and the environment. The study also showed that:

- Stakeholders see the chemical industry as technically very competent and well resourced. However, they believe it lacks transparency and has been historically unwilling to engage in discussing the most serious issues about its businesses.
- Our industry is perceived as powerful and, like many powerful institutions, as lacking in accountability for our behaviour. Stakeholders admit great difficulty in evaluating us because of a lack of common metrics surrounding our performance.
- Product issues and risks are particularly not well understood and are the source of growing concern.
- Differences in the performance between large and smaller companies are regarded as a major challenge.
- Many stakeholders had heard of Responsible Care® and generally attributed positive qualities to it. At the same time, they did not see how the programme addressed broader challenges such as communications and accountability.
- Stakeholders were also unclear about the industry's commitment to sustainable development and how it related to Responsible Care® and other industry actions.
- Stakeholders are most concerned about how our industry manages and communicates product risks. They also believe we've made significant progress on worker protection. They retain a high level of concern on other environmental and health issues.

REPORT CARD: Coffee

Introduction

Agriculture remains the world's largest industrial employer, contributing to the livelihoods of more than 1.5 billion people worldwide. Agricultural commodities are the core of social and economic activity in many developing countries.¹ During the last decade, the earnings from these commodities have dropped to their lowest levels ever recorded, creating a huge crisis for significant parts of the planet. In the case of coffee, which is a direct source of income for more than 120 million people, the gravity of the situation cannot be overstated. Several studies suggest that the price of the major agricultural commodities has fallen between 50 and 86 per cent in the last 20 years, with coffee showing the greatest fall.

In the late 1980s and early 1990s, coffee-producing countries earned US\$10–12 billion per year from exports (f.o.b.). Since 2004, export earnings have dropped to around US\$5.5 billion per year. Whilst current prices have certainly improved, there is no question that the consequences of the crisis are still being felt around the globe.

Work in progress

Since this is the first report by the sector, it is useful to provide a brief overview of activities both before and since the 2002 UN World Summit on Sustainable Development (WSSD).

Prompted by the globalisation and market deregulation processes that have been ongoing since the 1990s, the aim of sustainability in the context of the coffee economy has become increasingly important. Understanding the full dimension of sustainability in the coffee sector requires going all along the value chain, not only focussing on producers, but also on those on the trading, processing and retailing sides. Sustainability in its economic, social and environmental dimensions can only be the result of a concerted dialogue among all stakeholders, understanding that neither market intervention nor absolute laissez-faire liberalism can provide the necessary framework for a healthy industry over the long term. The International Coffee Organization (ICO), an intergovernmental body made up of pro-

ducer and consumer countries, is a focal point where such dialogue can take place.

The 2001 ICO Agreement calls upon members to develop a sustainable coffee economy based on the principles of Agenda 21 and addressing economic, social and environmental aspects. In all its activities, ICO is committed to ensuring that the concept of sustainability addresses not only aspects concerned with environmental and worker protection area, but that it promotes economic viability and poverty reduction in coffee-producing countries.

In May 2005, at its 93rd Session, the International Coffee Council requested the Executive Director to consult all members about their views on the meaning of sustainability in the coffee sector. Building on the results of a survey that was conducted, four main areas were identified: sustainability as a national policy; debate and development of multilateral initiatives; trade barriers; and sustainability in the coffee sector.

As a preliminary definition, sustainability in coffee implies conditions of production, processing and trade for all parties involved in the supply chain that:

- a) provide an economic return that covers production and living costs plus a further margin for development;
- b) treat the environment responsibly so that natural resources remain available to future generations; and
- c) secure social and working conditions in accordance with international standards, conducive to the maintenance of stable communities.

Environmental sustainability: Relative to many other economic activities, the environmental impact of coffee growing and processing is highly positive. Coffee is a perennial, evergreen shrub or small tree that generates oxygen and has important carbon sequestration properties. It stabilises soils and, varying according to technologies used, allows many of the biodiversity features of the original environment to survive. The main problems are the adverse effects on biodiversity of unshaded plantations in areas which were originally

¹ See Robbins Peter, *Stolen Fruit, The Tropical Commodities Disaster* (Zed Books, 2003).

forested, and water pollution caused by untreated wet processing effluents. However these are problems with relatively straightforward solutions.

Social sustainability: Because it is generally labour-intensive, coffee cultivation encourages the maintenance of large and stable rural communities. It is also an important source of cash income in areas where the infrastructure for other economic activities is lacking. Problem areas tend to be shared with other forms of commercial agriculture in developing countries such as failure to comply with labour legislation, including minimum wages, and are not specific to coffee. There appears little evidence of abusive forms of child labour, although children regularly assist with the harvest in many countries, an activity which is often positively linked to the cultural environment.

However, in the last five years, historically low prices for coffee have caused a series of social problems. These include:

- abandonment of farms by indebted growers;
- increased rural unemployment;
- migration of population to urban areas;
- lower available income for education and health care;
- gender discrimination in education choices;
- illegal emigration to developed countries; and
- increased narcotic drug plantings with associated criminal activities.

These negative social effects derive mainly from the absence of conditions permitting basic economic sustainability.

Sustainable coffee: Organic, eco-friendly and fair trade coffees fill a market niche that is not only rewarded with a premium price but can also provide other benefits (i.e. capacity building) that help producers improve their sustainability. The market for these coffees has grown quite robustly over the last years, involving over 30 producer countries, hundreds of producer organisations, dozens of specialised traders and more than 20 consuming countries. While sustainable coffees represent less than two per cent of consumption in the developed markets, they are experiencing the fastest growth in the whole sector.

Future challenges

In looking for solutions to create a sustainable coffee sector it is crucial to understand that there are severe constraints on alternative economic activities in many coffee-growing areas arising from environmental and infrastructure factors, the three to four-year lag between planting and initial cropping, and because of limitations on market access for otherwise viable alternatives.

Apart from direct market intervention, which is politically and technically difficult, actions to address the problem are twofold: creating an environment that facilitates economic diversification; and installing measures designed to restore some balance in the market by increasing demand. There are a limited number of market-oriented measures that can directly address the supply-demand balance. On the supply side, two policies are possible. These are: to use the experience of the coffee crisis to create awareness in national and international bodies of the danger of embarking on any projects or programmes that will further increase supply; and to increase the benefits accruing from value-added products rather than traditional bulk commodity exports.

On the demand side, market development programmes are highly acceptable to most parts of the coffee community, especially the private sector. Recognition of this is now needed from multilateral financing institutions and donor governments, bearing in mind that in some emerging markets, as in producing countries, the ability of the private sector alone to develop consumption is insufficient. There is significant funding at multilateral and national institutions earmarked for development projects, but it is not currently available for coffee sector initiatives. This should change. In the absence of direct supply management, diversification is difficult but actions for market development and quality improvement are broadly acceptable. Steps to allocate funding for such projects need to be taken without further delay. The acceptance of this concept would be an important challenge to the donor organisations, involving a genuinely innovative and effective approach to problems of commodity trade, but also requiring some changes in conventional thinking.

In general, the experience of the coffee market in the last few years has led producing countries to emphasize the priority of economic sustainability as the key element when analysing new initiatives.

Partnership opportunities

The sector has engaged in a number of partnerships, involving fair trade and sustainability issues. Chief among these is the *Common Code for the Coffee Community*. This is a joint initiative of coffee producers, trade and industry, trade unions and social as well as environmental NGOs, facilitated by the European Coffee Federation (ECF) and supported by the German and Swiss governments. Detailed information about the Code can be found at <http://www.sustainable-coffee.net>. Its aim is to draw up and implement a code of conduct that describes the criteria for sustainability in the production, processing and marketing of “mainstream” green coffee and that can form the basis for commercial transactions.

The Code embraces the three aspects of sustainability as defined in the principles of Agenda 21, and is being overseen by a multi-stakeholder Steering Committee that consists of representatives from producers, traders and processors, trade unions and NGOs.

A *Sustainable Coffee Partnership* has been proposed by the International Institute for Sustainable Development (http://www.iisd.org/trade/commodities/sci_coffee_partnership.asp). As envisaged, the multi-stakeholder partnership would act in an advisory and consultative capacity for the ICO. While the ICO Executive Board decided that it was premature to create a formal structure for the Sustainable Coffee Partnership, a proposal for conducting a cost-benefit analysis of common sustainability standards serving the coffee sector was approved during the ICO's January 2006 meetings.

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REPORT CARD: Soaps, Detergents and Maintenance Products

Introduction

The Association for Soaps, Detergents and Maintenance Products (A.I.S.E.) is the official body representing the soaps, detergents and maintenance products industry through the national associations in 30 countries, primarily in Europe. Combined membership of the current 33 national associations totals more than 900 companies, ranging from small and medium-sized enterprises (SMEs) to multinationals, active in the industrial and institutional (I&I) and the consumer good markets. It is estimated that the total market value of A.I.S.E.'s full membership is around 35 billion euros. The A.I.S.E. Secretariat is based in Brussels, Belgium.

Work in progress

The soap, detergent and maintenance product industry in Europe has put forward a number of voluntary initiatives to further promote sustainable production and consumption of its products, whether for consumer or professional use.

The latest initiative, the A.I.S.E. Charter for Sustainable Cleaning¹ is a common, voluntary approach promoting and demonstrating continual improvement of the industry's sustainability profile. Launched in December 2004, the Charter goes beyond legal requirements and is founded on two main components.

The first element is a set of sustainability procedures that apply to the design, raw material use, manufacture and use of products. Companies adopting these or equivalent practices in their management systems can join the Charter. A.I.S.E. has developed a set of sustainability procedures for use as benchmarks of good practice in factory management and product design, taking into account best management practice for different product life cycle phases as defined in ISO 14062 and similar standards, such as OSHA 18000. Companies that want to join the Charter for Sustainable Cleaning need to pass the Charter Entrance Check. This check is performed on-site by an independent and accredited verifier. This guarantees that all applicants are individually assessed on the same basis by a neutral, professional verifier.



The use of the registered Charter logo is granted only to those companies having officially committed to the Charter for Sustainable Cleaning and subject to licensing conditions provided by A.I.S.E.

Consumers and professional users can trust that Charter companies are fully committed to safeguarding people's health and the environment.

In order to demonstrate how the industry is improving, the A.I.S.E. will report regularly on the sustainability performance of the industry across Europe (EU 25 + Norway and Switzerland). Each year, A.I.S.E. will produce a publicly available Sustainability Report based on aggregated data for 10 Key Performance Indicators, grouped according to their economic, environmental or social importance, and using data provided by individual members of the Charter (e.g. energy consumption, CO₂ emitted, water use, etc.) .

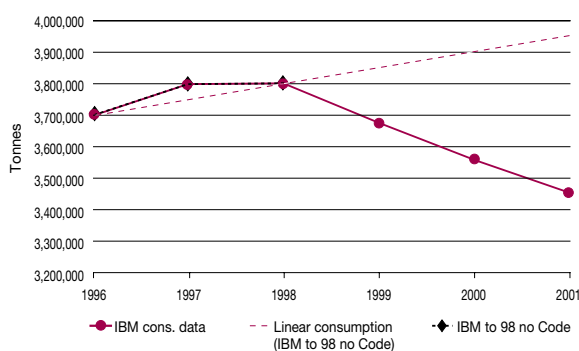
The forerunner to the Charter was A.I.S.E.'s Code of Good Environmental Practice for household laundry detergents, launched in 1998. Thanks to the introduction of new formulations and of innovative products, between 1998 and 2002 European detergents producers managed to reduce by almost a quarter the number of ingredients that do not bio-degrade well (e.g. polymers). These innovations have also enabled European consumers to reduce their consumption of detergents by almost eight per cent per capita and by more than 16 per cent on a per wash basis. Additional reductions in both the use of energy

¹ <http://www.sustainable-cleaning.com>

per wash (six per cent) and of packaging per capita (seven per cent) have further contributed to reduce the industry's impact on the environment. These results were achieved despite the demographic changes in Europe (more and smaller households) that led to more washes over the same period.

Promoting sustainable consumption and safe use of products

Household laundry detergents consumption trends – Europe 1996–2001. Comparison to code effect



The pan-European Washright campaign

The Washright campaign² continues to provide consistent advice to consumers throughout Europe on how to wash laundry in a more environmentally-friendly way while still maintaining performance. The campaign was initiated in 1998 through A.I.S.E. to complement the industry's work to develop products and packaging with lower environmental impacts, while educating consumers on more efficient washing habits. In 2000, A.I.S.E. launched a pan-European TV campaign to promote the Washright messages more widely.

Since the implementation of the Washright campaign, the Washright panel, developed by A.I.S.E., has been shown on billions of laundry detergent packages marketed throughout Europe by companies committed to A.I.S.E. Code of Good Environmental Practice. Since 1998, 90 per cent of European household laundry detergent products have featured the Washright panel, which amounts to over 500 million packages per annum across Europe.

Safe behaviour tips for consumers

For consumers, A.I.S.E. has developed a set of safe-behaviour icons and tips for best use of household cleaning products. These supplement mandatory legal requirements and the icons are progressively appearing on packages, in leaflets and on company

Web sites. Through the development of these harmonised messages and icons across Europe, the industry aims to improve the effectiveness of labels so that the most important information can be communicated to consumers when they need it.

A campaign will start in 2006 in Europe in order to raise awareness of this sensible advice among consumers and to encourage them to act upon it.



Future challenges

The first A.I.S.E. Sustainability Report will be published in 2006, based on KPI data provided to A.I.S.E. by companies committed to the Charter. This report will provide benchmark data for 2005. Progress against each of these indicators will then be communicated in the subsequent editions of the Report. Explanatory notes for trends observed, best-practice examples and case studies will be featured. This will enable stakeholders to assess the progress of the industry while individual companies will be able to evaluate their own performance against the industry average.

Besides voluntary activities such as the Charter, the biggest event on the horizon for the industry is the introduction of the new EU chemicals policy, known as REACH (Registration, Evaluation and Authorisation of Chemicals). A.I.S.E. has consistently supported a workable REACH regulation that takes into account not just the hazard presented by certain chemicals, but also the real risk, calculated as a function of both hazard and actual exposure.

As downstream users of chemicals, A.I.S.E.'s members have argued to be involved in all stages of the REACH process, including exchange of information on specific substances. This is founded on the experience obtained from the HERA³ project, a collaboration with the European Chemical Industry Council (CEFIC), that not only evaluated chemicals for

² <http://www.washright.com>

³ <http://www.heraproject.com>

environmental and health impact, but also examined ways to communicate about risk—rather than just hazard—with the public. In parallel with REACH, A.I.S.E. has been contributing to the ongoing GHS (globally harmonised system of classification and labelling of chemicals) process, under the auspices of the UN.

A.I.S.E. considers that one of the greatest challenges ahead is that of building consumer confidence in product safety in an era of increasing public sensitivity to risk. This was the theme of the organisation's latest Information Day, held in Brussels on 30 November 2005, with the participation of representatives from the EU institutions, the British government, academia and industry.

Partnership opportunities

A.I.S.E. works with a wide range of partner organisations to help convey its message of sustainable consumption and production. These include national governments, the European Union institutions, NGOs and other industry federations. This co-operation was visible during the Washright campaign, through active support by UNEP, the European Commission (DG Environment) and several national consumer organisations. A.I.S.E. will implement the Charter in a spirit of ongoing and open dialogue with all interested bodies, both at EU and national level. The initiative will evolve with time as experience develops and feedback is obtained.

Specific projects have been conducted with the European Chemical Industry Council (CEFIC⁴), and under the aegis of the Downstream Users of

Chemicals Co-ordination Group (DUCC⁵). As mentioned above, A.I.S.E. and CEFIC worked together on the HERA project, which evaluated the risk of environmental and health impacts associated with chemicals based on a risk assessment.

A.I.S.E. believes it is important to liaise with other parallel organisations to encourage possible cross-fertilisation of ideas. Maintaining close contacts with external stakeholders and ongoing collaboration with international colleagues remains a high priority. As such, A.I.S.E. co-operates actively with sister associations in the United States (US SDA⁶), Canada (CSDA) and Japan (JSDA⁷), all of which have their own programmes that support the industry's sustainability.

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⁴ <http://www.cefic.org>

⁵ <http://www.duccplatform.org>

⁶ <http://www.cleaning101.com>

⁷ <http://www.jsda.org/etop.html>

REPORT CARD: Fertilizer

Introduction

International Fertilizer Industry Association (IFA) members come from 84 countries. More than half of its membership is based in developing countries. As well as producers of nitrogen, phosphate and potash fertilizers, IFA members include support industries like shipping agents, engineers, traders, consultants, retailers and others; micronutrient and organic fertilizer producers; research institutes and associations; and government ministries.

Because fertilizer production and use are linked to water quality and use efficiency, good soil management (and preventing land degradation) and agricultural production, fertilizers are important for the achievement of the UN Millennium Development Goals on hunger and poverty, environmental stability and global development co-operation as well as a number of other sustainability goals.

Work in progress

What we said in 2002: internal knowledge and technology transfer to be advanced; continual improvement in our safety record is an imperative; developing improved stakeholder and community relations globally...

Since 2001, IFA has been benchmarking *safety in the fertilizer industry* by surveying member companies and reporting on lost time injuries (LTI), a common measure of accidents based on resulting absences from the workplace. Based on data collected over the first three years, the benchmark LTI rate for the fertilizer industry is estimated between 4.60 and 5.90. Compared with data on other sectors published by Eurostat, this result suggests that the fertilizer industry is one of the safest industrial sectors. Nonetheless, anything other than perfection in safety requires continued diligence. Parallel to the benchmarking process, IFA's Technical Committee elaborated 11 principles of safety in fertilizer production, which member companies are encouraged to implement at all their sites.

With regard to the *promotion of technical innovation and good management practices* within the

industry, the biennial Technical Symposium remains one of the pre-eminent opportunities for the exchange of experiences and expertise that help raise the overall level of the fertilizer industry's performance. Every two years, IFA and IFDC (International Fertilizer Development Center – An International Center for Soil Fertility and Agricultural Development) co-operate on fertilizer production technology workshops to help engineers improve the performance of production sites and enhance their knowledge of relevant safety, health and environmental issues. Many participants are from developing countries, so this is an important opportunity for capacity building and knowledge transfer.

In 2004, IFA conducted its first study of energy consumption in ammonia production and of this sector's greenhouse gas emissions. The ammonia sub-sector is a representative of the entire industry on these two issues because some 94 per cent of energy used in the fertilizer industry is dedicated to ammonia synthesis. The survey revealed that best-in-class sites consume between 28.0 and 33.1 gigaJoules (GJ) per metric tonne (mt) of ammonia. The group average was 36.8 GJ/mt NH₃ and ranges from 28.0 to 53.0 GJ/mt NH₃. The average carbon dioxide emissions per tonne of ammonia for the facilities surveyed was 2.07 mt CO₂, with an average recovery rate of 37.7 per cent.

IFA also conducts a biennial survey on key emissions associated with fertilizer production, including carbon dioxide, methane, nitrogen oxides, ammonia, fluorides, sulphur dioxide and dust. Across the 52 indicators reported, a median of 78 per cent of surveyed plants conformed with performance standards for existing/older technology and a median of 44 per cent met the more stringent requirements expected from new technology. These "Best Available Techniques" (BATs) were developed by the European Fertilizer Manufacturers Association in accordance with the European Union's Integrated Pollution Prevention and Control (IPPC) Directive and are used as general references across the global industry. Details about the fertilizer BATs can be found at <http://www.efma.org/manufacturing/section05.asp>. Thirty indicators showed positive changes over the previous survey, 18 reflected a negative trend and four were unchanged. At this time, the detailed infor-

mation from this exercise is reserved for participants, but a summary for decision-makers is forthcoming.

In 2004, IFA shared the fertilizer industry's perspective on technology transfer with the Intergovernmental Panel on Climate Change (IPCC) to help that group better understand the barriers to and drivers for the uptake of BATs in a globalising industry. IFA is currently engaged in the review processes of the IPCC's Fourth Assessment Report and Guidelines for National Greenhouse Gas Inventories.

Wherever appropriate, IFA has integrated *stakeholder consultation and partnership* into its ongoing activities. With regard to a dialogue event, IFA members expressed a preference to continue pursuing local stakeholder dialogues, which they find more meaningful than a global exercise.

Future challenges

What we said in 2002: enhancing efficiency of nutrient uptake; research on removing naturally occurring impurities from raw materials; better engagement of traders and retailers to address sustainability issues...

When we prepared our sustainability report in the lead-up to the WSSD, we flagged *fertilizer use efficiency, or sustainable consumption of our sector's end products*, as a key area for progress. Improved fertilizer use efficiency reduces nutrient losses to the environment and is therefore an important contribution our industry makes to addressing a range of issues, including nutrient enrichment of waterways, greenhouse gas emissions from agricultural lands, invasive species/ ecosystem balances, water quality, the well-being of fisheries and some aspects of human health.

Some of IFA's recent activities to support responsible fertilizer use are:

- Participation in the scientific International Nitrogen Initiative (<http://www.initrogen.org>), including sponsoring the Nitrogen Fertilizer Rapid Assessment Project carried out by the Scientific Committee on Problems of the Environment (SCOPE);
- Organising the first IFA International Workshop on Enhanced-Efficiency Fertilizers to allow policy-makers, scientists and industry representatives to discuss the potential of these products and the obstacles to their wider use. Papers from this workshop can be downloaded from http://www.fertilizer.org/ifa/news/2005_17.asp;

- Preparation of a guide (forthcoming) to help the industry, farmers and other stakeholders to understand their relative roles in integrated plant nutrient management (IPNM).

Since 2002 our approach to promoting responsible use of fertilizers has evolved to also include the other extreme: under-use. Every harvest removes nutrients from the soil, and these must be replenished in order to maintain soil fertility. In an ideal world, all sources of nutrients are combined in IPNM. Farmers start with on-farm sources of nutrients and legumes and then supplement them with fertilizers. Fertilizers were developed because organic sources of nutrients were insufficient to meet the needs of a growing population. In some places, such as Africa, available organic materials are very limited, and often subject to competing demands for their use (such as fuel for cooking). It is estimated that the nutrients lost from Africa's soils every year are worth US\$4 billion dollars in fertilizers. This is a major contributing factor to severe soil degradation, desertification and declining agricultural productivity.

Achieving optimal soil fertility, crop production and environmental protection requires site-specific nutrient management practices that take into account variations in soil characteristics, crops, agro-climatic conditions and available sources of nutrients, among others. Because there are so many factors to consider, a sustained investment is needed by the industry, governments and other stakeholders to support research on good management practices and their diffusion to farmers.

No major breakthroughs have occurred during the past three years with regard to removing *naturally occurring impurities* from fertilizer raw materials, such as some phosphate rocks and potassium salts.

IFA is currently undergoing an internal review that should set the stage for more fully *engaging traders and retailers in the life cycle initiatives* undertaken by the Association. In the same spirit, a new Vice Presidency for Sustainable Development will be created in June 2006, pending a vote of the membership.

Partnership opportunities

Recognising that declining soil fertility in some regions, especially Africa, poses a real problem for human well-being, IFA has become a vocal proponent of the framework conditions needed for crop nutrients to become more widely available in those places. This could *help reverse extreme soil degradation*, which leads to decreasing agricultural production and devastating environmental effects, such as erosion and desertification. IFA has made 2006 its

Year for Africa (<http://www.fertilizer.org/ifa/africa/africa.asp>) to raise awareness of this imperative. Because this challenge necessitates strong partnerships among the fertilizer industry, regulatory authorities, donors, local private sector actors, farmers, credit structures, and information and communications technology providers, among others, IFA is actively supporting the 2006 Africa Fertilizer Summit (<http://www.africafertilizersummit.org>).

Nutrient security is another new focus for IFA. The Green Revolution, during which fertilizers and other agricultural inputs became widely available, successfully raised agricultural yields. However, in some places the focus on staple crops decreased the nutrient balance of human diets and exacerbated micronutrient deficiencies. Diets containing a wider variety of fruits and vegetables would help, but these crops usually require high levels of micronutrients; providing appropriate fertilizers is one way our industry can contribute.

In some cases, crops can be vehicles for micronutrients that have little or no agronomic value, but which are directly beneficial for human health. This innovative approach could be adopted in a cost-effective manner to address several key human micronutrients deficiencies across the globe, and the industry has chosen zinc, selenium and boron for its initial focus. One of the biggest challenges that the fertilizer industry faces with regard to human nutrition is creating ties with new partners, such as the World Health Organization (WHO). IFA and the HarvestPlus programme of the Consultative Group on International Agricultural Research (CGIAR) are already exploring the possibility of a joint project, and IFA looks forward to forging links with others.

Improving fertilizer use efficiency will remain a perennial area for partnerships. In addition to the partners listed above, we also need to look to other fields, such as biotechnology, where developments are likely to have an impact on crop nutrient uptake.

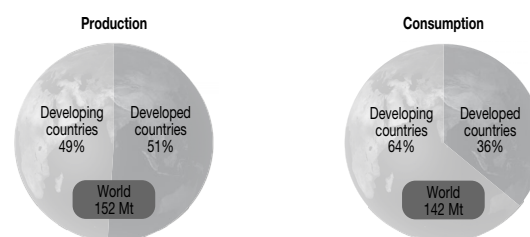
IFA's Technical Committee hopes to work with policymakers to improve the scientific basis of regulations concerning *naturally occurring radioactive materials*. This would create opportunities to maximise the re-use of waste materials without compromising worker and public safety. For example, phosphogypsum is safely used in some places as a building material or to pave roads. However, regulations in other locales are such that phosphogypsum cannot be recycled in this manner; in such places, the only solution is storing the material in stacks.

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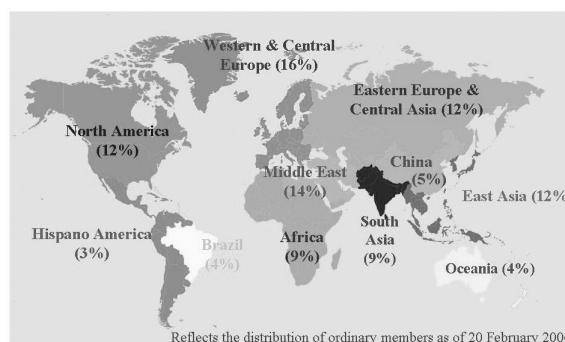
Annex

Developed and developing countries' shares of world fertilizer production and consumption in 2002

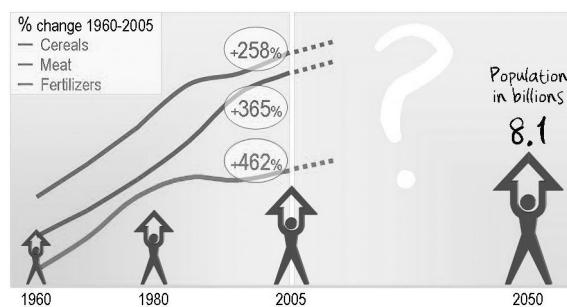


Source: IFADATA 2004

IFA members across the globe



Feeding a growing population



Source: FAO, IFA

REPORT CARD: Food and Drink

Introduction

The food and drink (F&D) manufacturing industry operates as secondary or final processor of agricultural raw materials into food and drink products. It represents one of the largest industrial sectors worldwide and makes a major contribution to local, national and regional economies. The F&D sector is a highly diverse industry ranging from small and medium-sized enterprises (SMEs) to major multinational companies, and comprises a variety of sub-sectors, product categories and production processes. In this Report Card, the F&D industries outline the progress made towards sustainable development since the 2002 Johannesburg World Summit on Sustainable Development (WSSD), covering the economic, social and environmental pillars of sustainability. Given the absence of a global F&D industry organisation, this Report Card has been prepared by CIAA, the Confederation of the Food and Drink Industries of the EU, drawing on European and, to the extent available, worldwide data.

Work in progress

What we said in 2002: ensuring availability, quality and safety of food supply; progress in resource management (particularly for water and energy); increased dialogue with all partners in the food supply chain to identify concerns and respond openly...

Economic achievements

Since 2002, the F&D industry has registered relatively limited but stable growth in some regions (EU and North America) while other markets—particularly in Latin America and Asia—have undergone considerable expansion. For instance, China's food processing industry is continuing to grow at double-digit rates with a production value of US\$150 billion in 2003. According to the World Trade Organization, world trade in agricultural and F&D products increased strongly since 2001, with an annual growth

rate of six per cent in 2002 and 15 per cent in 2003. Europe is the largest importer of agricultural and F&D products, and the second largest exporter (behind the U.S. and followed by Canada, Brazil and China). Overall, the F&D industry remains one of the largest employers worldwide. In the EU-25, North America and Japan, between 11 per cent and 13 per cent of those employed in manufacturing work in the F&D industry.

Eco-efficiency improvements

In the last two years, the F&D industry continued to concentrate its efforts to improve eco-efficiency in four key areas: water, energy, waste and packaging. Between 2000 and 2002, EU-based F&D companies participating in the CIAA Environment Review achieved a 15 per cent reduction in total water consumption, down from 5.95 to 5.08 m³ per tonne of product. Many F&D companies have reported reductions in energy consumption per production unit, which has been achieved through efforts in the field of co-generation, fuel substitution, the use of agricultural by-products as an energy source, and equipment and process innovations. Significant progress has also been made in waste and packaging source reduction. Particular effort has been placed on recycling and recovery of packaging waste. European data confirm that packaging use has grown only moderately since 1998 (less than one per cent annually) whereas tonnes of waste recovered and material recycled have both grown much faster (21 per cent and 20 per cent respectively, between 1998 and 2002). This has resulted in a relative decoupling of environmental impacts of waste from product/packaging use. The last five years have shown a notable increase in the uptake of Environmental Management Systems (EMSs) internationally. The number of F&D companies certified under the ISO-14001 standard more than doubled between 2001 and 2004, rising from 1,190 to 2,388.

Promotion of sustainable agriculture

A major part of environmental impacts along the food life cycle occurs during the agricultural cultivation phase. At the same time, downstream food producers

realise how damage to ecosystems and the problems faced by rural communities affect agricultural productivity, consumer confidence in the food chain, as well as society overall. For this reason, in 2002 the Sustainable Agriculture Initiative (SAI) Platform was launched by Groupe Danone, Nestlé and Unilever to promote sustainable agriculture on a global scale. Today it comprises 20 major companies. The SAI Platform aims to promote the development of sustainable agriculture worldwide, embracing all three pillars of sustainable development. Its activities are open to all stakeholders of the food chain, including farmers. So far, the initiative has developed principles and practices for the sustainable production of coffee, cereals, dairy, fruits as well as potatoes and other vegetables. These principles and practices are now being tested through pilot projects worldwide, which also aim to identify indicators of progress and ways to roll out the concept more widely.

Environmental reporting

In 2004, CIAA published its first Environment Review, which was a follow-up to the 2002 WSSD F&D sector report. CIAA identified a number of key Environmental Performance Indicators in order to start tracking progress over time in key areas such as water and energy consumption, greenhouse gas (GHG) emissions, wastewater and disposed waste generation. The survey provides tangible evidence of progress in several key environmental areas. Similar sustainability reports have been produced over the last years in other regions (e.g. Australia and Japan) and by virtually all multinational F&D companies. However, much remains to be done to increase the coverage of available data—particularly on the global level and from SMEs. The measurement, collection, benchmarking and communication of environmental data from the F&D industry is particularly challenging due to the high structural diversity of the sector. The heterogeneity of companies, sub-sectors and production processes under the F&D “umbrella” makes available data less comparable than in more homogeneous and consolidated sectors.

Diet, nutrition and health

Nutrition and health have become two of the most important issues facing the food and drink industry. The number of overweight people has been increasing sharply worldwide. The responsibility for addressing challenges such as obesity must involve the participation of many stakeholders including governments, research, health professionals, retailers, consumers and the media as well as the food industry. Improved public health education on nutrition and

healthy lifestyles is urgently needed in order to solve current health problems. On the EU level, the F&D industries in 2005 endorsed a *Manifesto on Diet, Physical Activity and Health*, which sets out the industry’s guiding principles/strategic objectives to work with consumers, legislators and other partners. CIAA also supports the European Commission’s *European Platform for Action on Diet, Physical Activity and Health* as a forum for stakeholders to share advice on best practice and to develop action plans to tackle the rise of health problems related to diet and insufficient physical activity.

CIAA, together with the World Federation of Advertisers (WFA), was also the driving force behind the creation of industry-endorsed *Principles on Food and Beverage Product Advertising*. These principles ensure that food advertising is in line with national and global efforts aimed at encouraging a balanced diet and healthy lifestyle. The principles have been taken as the basis for a global set of standards published by the International Chamber of Commerce (ICC), and are now being used by the European Advertising Standards Alliance to strengthen self-regulatory mechanisms throughout Europe.

Future challenges

What we said in 2002: developing better global co-ordination to share best practices and progress on sustainability; identify, develop and facilitate acceptance of new technologies that benefit consumers and the environment; support sustainable agricultural practices so they become systematic and utilised globally...

Promoting emerging technologies: Since 2002, F&D industries have been exploring the potential contribution of emerging technologies to sustainable development and, in particular, to sustainable agriculture. In this context, technologies such as precision agriculture, conservation tillage, and the use of biogas and information technologies like geographic information systems (GIS) are being assessed against the three pillars of sustainability. As certain aspects of specific new technologies, such as genetically modified organisms (GMOs), still require further examination, the F&D industry is supportive of additional R&D in this field. Biotechnology is one of the most promising drivers for innovation and growth in the F&D sector.

Climate change: The primary source of GHG emissions from F&D processing is CO₂ from combustion processes. Market-based instruments such

as emissions trading—if implemented in a cost-effective manner—can play an important role in tackling this type of emission. Regarding smaller sources of other GHGs, an area of current and future efforts in the F&D sector is refrigeration and air-conditioning, where certain GHGs (e.g. HFCs) and ozone-depleting substances (e.g. HCFCs) are in use due to a lack of viable alternatives in certain application areas. The F&D industry is supportive of a gradual move towards alternative/natural refrigerants (CO₂ and/or ammonia and others) once they become viable alternatives. Also, the role of agricultural practices will need to be further analysed to reduce upstream sources of GHG emissions.

Sustainable food transport: The last 50 years have shown a significant increase in food transport for a number of reasons, including globalisation, the dominance of large supermarkets, changes in transport logistics, intensification of agriculture and a switch to food shopping by car. “Food miles” are thus an issue for the whole food chain (not just manufacturers), consumers and government authorities. There is a complex relationship between food miles and sustainability and there can be trade-offs between environmental, social and economic factors. Studies have shown that seeking food products that have moved the least distance is sometimes counter-productive in environmental terms (e.g. in the U.K. it has been shown that it can be more sustainable to import tomatoes from Spain than to produce them in heated greenhouses outside the summer months). The various aspects of the food miles debate need to be carefully examined in order to assess their potential contribution to ongoing efforts to ensure the sustainability of food transport.

Partnership opportunities

R&D – Technology Platform Food for Life: In 2005, a European Technology Platform on Food for Life was set up under the auspices of CIAA. This Platform

brings together food companies, supply chain partners, academia, researchers, consumer bodies and the European Commission. The Platform seeks to promote strategies to provide EU citizens with safe, high-quality and health-promoting products while meeting the increasing demands for sustainable food production in economic, environmental and social terms. Within this framework, the sustainable production of food has been selected as one key area. Research will address life cycle analysis of the food chain to prevent and reduce waste streams, to decrease energy and water use, and to apply chemicals appropriately.

Voluntary sustainable production forum with the European Commission: At the EU level, in 2004 CIAA agreed on a general framework for a voluntary sector-specific sustainable production forum with the European Commission. The aim of this partnership is to identify sector-specific environmental challenges in the F&D industry (e.g. water, waste, energy and packaging) and to agree on voluntary initiatives to address these challenges in the most cost-effective manner. Besides the European Commission and CIAA, these sectoral fora will involve various other relevant stakeholders, such as NGOs, academics and researchers.

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REPORT CARD: Forest and Paper

This Report Card was prepared by the International Council of Forest and Paper Associations (ICFPA), a grouping of trade associations from 43 countries, representing 90 per cent of the world's paper production, and 50 per cent of its wood production. The objective is to highlight key sustainability issues within the sector and to identify opportunities moving forward.

The forest and paper products industry is a major contributor to the world economy, producing primary goods valued at approximately US\$950 billion per year. A growing share of this trade is in the hands of developing countries, which accounted for more than 16 per cent of the total in 2004. The forest products industry consists of thousands of small and large enterprises, providing millions of jobs and support for local communities in many parts of the world. Through substantial and continual efforts over the last decade—partly through regulation; partly on a voluntary basis—the industry has significantly reduced its environmental footprint and improved its sustainability performance.

The importance of responsible forest management practices was highlighted by the UN World Summit on Sustainable Development (WSSD). As noted in paragraph 43 of the WSSD Plan of Implementation: *“Forests and trees cover nearly one third of the Earth’s surface. Sustainable forest management of both natural and planted forests and for timber and non-timber products is essential to achieving sustainable development and is a critical means to eradicate poverty, significantly reduce deforestation and halt the loss of forest biodiversity and land and resource degradation, and improve food security and access to safe drinking water and affordable energy.”*

Work in progress

Continual improvement of sustainable forest management (SFM) practices:

Forest certification is a cornerstone of sustainable forest management. Since 2002, the area of SFM-certified forests worldwide has doubled from 110 million hectares to over 220 million hectares. ICFPA members are actively working to promote credible, third-party certification systems based on internation-

ally recognised SFM criteria, and expand adherence to SFM principles in timber producing nations around the world. (see graphs and CEPI's Comparative Matrix of Forest Certification Schemes at <http://www.forestrycertification.info>)

Forest-based industries have invested heavily over the past decade in the development and establishment of forest plantations or planted forests. Sustainably-managed planted forests are an effective complement to natural forests and will play an increasingly important role in combating poverty and development of the industry. As demand for forest products and fuelwood (or forest biomass) continues to grow, the sustainable use of natural and planted forest resources will help the world to meet its needs.

Climate change mitigation: The world's forests—and the wood and paper products that come from them—are unique in their ability to remove carbon dioxide from the atmosphere and store it. The carbon sequestration properties of forests and forest products make the global wood and paper industry a key player in finding climate solutions.

- a) *Specific carbon dioxide emissions:* greenhouse gas emissions from the pulp and paper industry have declined significantly over the past 20 years (in the range of 7–36 per cent per tonne of product, depending on the region) thanks to ongoing efforts by the industry to improve energy efficiencies, reduce its reliance on fossil fuels and expand the use of renewable energy sources, particularly biofuels. The industry is committed to further improve its energy efficiency.
- b) The pulp and paper industry has invested heavily in technology to *reduce energy consumption*. Foremost among these technologies is combined heat and power (CHP), or co-generation. CHP installations allow savings of some 30–35 per cent of primary energy compared to conventional boilers.
- c) *The global pulp and paper industry is the single largest user of carbon-neutral biomass fuels.* On average, biomass (residual woods, bark, sludge and black liquor) accounts for more than 50 per cent of total energy consumption at pulp and

paper producing facilities in Europe, Canada and the U.S., and more than 65 per cent in Brazil.

- d) *The industry is investing in new technologies to improve accuracy, transparency and consistency in the data collection and reporting processes.* ICFPA recently led an international effort to develop tools that allow companies to estimate the greenhouse gas (GHG) emissions from their facilities in a manner consistent with protocols developed by the World Resources Institute/World Business Council for Sustainable Development. These tools are available on the Internet free of charge and are used by companies around the world to calculate emissions for both voluntary and mandatory reporting of GHG emissions.

Recycling is a key element in the paper industry's carbon cycle since it contributes towards reducing methane gas emissions from the landfilling of used paper products. Recycling rates—measured by the use of recovered fibre as a percentage of domestic consumption—have increased significantly over the past few years. In the U.S., the paper industry recovers 50 per cent of the paper consumed nationally; it is seeking a recovery rate of 55 per cent by 2012 (<http://www.paperrecycles.org/>). In Europe, the recycling rate reached 53.7 per cent in 2004, meaning that the European paper industry utilised an extra 1.8 million tonnes of recovered paper compared to 2003 (<http://www.paperrecovery.org/>). Efforts are ongoing within the sector globally to increase recovery rates and make the most efficient use of recovered paper.

Water is used in nearly every stage of the pulping and paper-making process. Thanks to investments in new technology, the global industry has reduced overall water consumption by 33 per cent on average over the last 10 years. Efforts to produce paper bleached without elemental chlorine have paid off, too: in little more than a decade, the industry has succeeded in reducing chlorine compound discharges to a fraction of their previous levels and has eliminated dioxins and furans from mill effluents.

Social and economic: Forest products companies make an important contribution to the economic and social development of the communities in which they operate. Because they are often located in rural areas, forest and paper companies can help reduce migration to urban centres and make an important contribution to alleviating poverty in many thousands of communities throughout the world. The forest products industry is an important generator of income and jobs in the developed areas of the world and is contributing to poverty alleviation in the developing economies of Asia, Latin America and Eastern Europe through capacity expansion, job creation and sustain-

able forest management. According to the FAO, global forest sector employment grew from 12.4 million in 1990 to 12.9 million in 2000, representing an increase of four per cent. This growth was particularly strong in developing countries.

Future challenges

Looking ahead, the forest and paper products industry will continue to seek ways to improve operational efficiencies, reduce its environmental footprint and strengthen overall sustainability performance. It will:

- *Expand use of and refine existing forest certification systems* by promoting systems that employ an independent third-party audit process to assess forest management practices according to internationally recognised SFM criteria.
- *Encourage SFM certification around the world*, particularly in developing countries.
- *Improve air quality* by investing in new technology.
- *Continue to assert leadership in greenhouse gas mitigation* throughout the sector's value chain.
 - Achieve further reductions in industrial GHG emissions. While industry will continue to strive for greater efficiencies it must be recognised that certain measures, such as investing in cogeneration technology or switching to lower carbon fuels, can only be carried out once. While there are opportunities to make additional technological improvements that will further reduce emissions of GHGs, many of these are not currently economical. A policy framework that provides positive incentives to continue to improve operational efficiencies would help the forest products industry to pursue more of these opportunities.
 - *Strive to improve performance in product recycling and forest carbon management*, and encourage the incorporation of life cycle considerations into global efforts to address climate change.
- *Promote the widespread adoption of environmental management systems* (ISO 14001 or Eco-Management and Audit Scheme – EMAS) within the industry. Such systems provide useful tools to improve environmental performance and measure progress.

- *Combat the illegal harvesting and trade of timber.* Illegal logging poses one of the most serious threats to the long-term existence of the world's forests and has significant environmental and economic implications. A 2004 study sponsored by the American Forest & Paper Association (AF&PA) to assess the extent of the illegal logging problem estimates that 5–10 per cent of the value of global wood products trade can be traced to suspiciously produced roundwood. The report concludes that the opportunity cost for U.S. exporters represented by illegal logging is at least \$460 million annually. The ICFPA is opposed to the illegal harvesting and trade of timber and has issued a position statement that strongly repudiates this practice and commits its member companies to work to eliminate the problem. It advocates the widespread implementation of the rule of law, strong local enforcement, third-party forest certification and expanded implementation of eco-management systems.

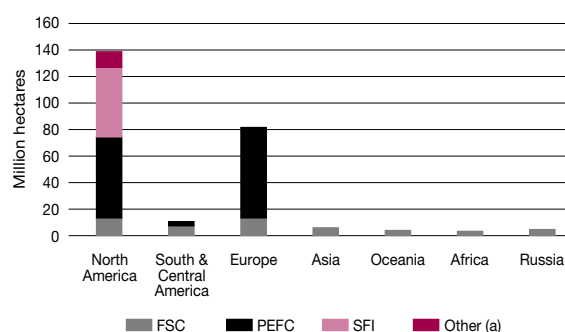
maintain a broad array of partnerships with diverse stakeholders at national and local levels.

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Annex

Chart 1: Certified forest area by scheme and region in July 2005 (million hectares)



Partnership opportunities

The global forest and paper products industry has a long history of partnering with multiple stakeholder groups, including national and sub-national governments, aboriginal groups, local host communities, international organisations and environmental NGOs. The industry works closely with the United Nations Forum on Forests (UNFF) and the Food and Agriculture Organisation (FAO) of the United Nations, while companies and associations around the world

Table 1: Certified forest area by scheme and region in July 2005 (million hectares)

	North America	South & Central America	Europe	Asia	Oceania	Africa	Russia	Total
FSC	12.3	7.2	26.5	0.8	1.2	1.9	3.8	53.7
PEFC	63.8	1.6	55.7		1.8			122.9
SFI	50.6							50.6
Other(a)	12.0			4.8				16.8
Total	138.7	8.8	82.2	5.6	3.0	1.9	3.8	244.0
a) Other in North America refers to American Tree Farm System AND in Asia refers to the Malaysian Timber Certification Council								
Source: Rupert Oliver, http://www.forestrycertification.info								

REPORT CARD: Iron and Steel

Introduction

Together with UNEP, the International Iron and Steel Institute (IISI) produced a report on the iron and steel sector in the series *Industry as a partner for sustainable development*. It was published in the run-up to the World Summit on Sustainable Development held in South Africa in August–September 2002. IISI and its South African steel-company members participated in the Johannesburg event, whose outcomes recognised that “mining, minerals and metals are important to the economic and social development of many countries.” Since 2002, global steel use and production have grown strongly. The main driver has been demand for steel in China, where production has increased at 15–20 per cent per annum and now accounts for nearly 30 per cent of the world total.

Work in progress

What we said in 2002: continued improvement in steel production technologies and development of new products (e.g. for lightweight steel automobiles) and services to meet evolving societal needs; integrating all pillars of sustainable development throughout the world’s steel industry...

For the first time in a long time, steel demand has outstripped supply. The resulting shortages have underlined the central role steel plays in the modern world. Steel profits have increased, with 2004 seeing the industry earning more than its cost of capital.

Following on from the policy statement on sustainable development issued by the IISI Board of Directors—involving CEOs of the 60 largest steel companies in the world—criteria have been established for IISI’s members to measure their sustainable development progress and for reporting that progress to employees, shareholders, customers and to the general public.

The Board agreed upon 11 indicators and in January 2004 IISI published the first report based on data provided by 44 member companies. Entitled *The Measure of our Sustainability*, the report has been cir-

culated widely (see: <http://www.worldsteel.org/?action=publicationdetail&id=9>). IISI believes it is the first time any industry has undertaken such a comprehensive exercise. A second report, with case studies, will be published in 2006. IISI is committed to encouraging all its members to use these indicators in their own internal and external reports on sustainable development. Of the 11 indicators, four relate to economic criteria; five to environmental performance; and two to social objectives.

The four economic indicators are: investment in new processes and products; operating margin; return on capital employed; and value-added. The five environmental indicators are: greenhouse gas emissions; material efficiency; energy intensity; steel recycling; and environmental management systems. The two social indicators are: employee training and lost time injury frequency rates.

The goal of market development for steel is to provide steel users with more intelligent solutions for their material problems. IISI manages an international consortium of 25 steel companies developing the application of ultra high-strength steel to lightweight passenger cars. The latest steels now offer better lifetime CO₂ and energy performance than aluminium-intensive vehicles. On 20 October 2005, IISI will receive a top award for energy saving from the U.S., having been nominated by General Motors.

In 2005, IISI also launched a 12-company consortium to develop sustainable steel housing. The ambitious programme will last five years and the first phase is sustainable housing projects in India and Poland. The consortium is called “Living Steel.”

Future challenges

What we said in 2002: economic success of steel industry companies in an increasingly globalised world economy; social change—including employment and community development—as the world steel industry transforms...

An average of 1.6 tonnes of CO₂ is generated for every tonnes of steel produced. Although much less

energy intensive than other metals, the sheer size of the steel industry means that it accounts for six per cent of all man-made greenhouse gas emissions. In the short term, there is not much scope for emissions reduction in the most efficient steel plants using best current technology. The challenge is to help steel industries—mainly in the former Soviet bloc and China—to modernise and incorporate the latest technology. In the long term, however, IISI members are looking for a radical reduction in CO₂ emissions. A Euro 40 million programme of research called ULCOS (ultra-low carbon steelmaking) is underway in Europe, and IISI is co-ordinating a programme to spread collaboration research across the world.

The other major challenge for the sector is to reduce accidents in steel plants to zero. Although much progress has been made, there are still too many accidents and fatalities. Again, the best steel plants show what can be done—there are many plants with virtually zero lost time injuries. It is a question of commitment—starting at the top.

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Annex 1

IISI sustainability policy

In August 2002, IISI published the following policy statement entitled *The World Steel Industry and Sustainable Development: Vision and Goals*.

Vision

Steel is valued as a major foundation of a sustainable world.

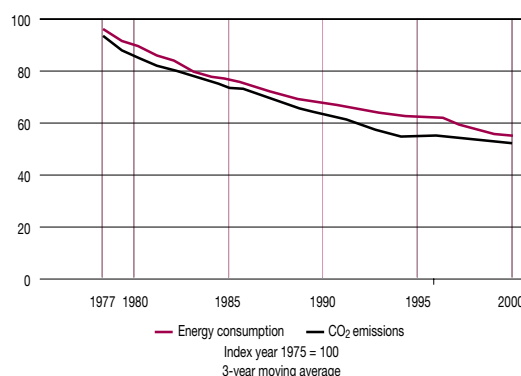
This is achieved by a financially sound industry, taking leadership in economic, social and environmental sustainability and seeking continuous improvement.

Goals

The Member Companies of the International Iron and Steel Institute are committed to sustainable development and will:

- Operate their business in an efficient and financially sustainable way in order to supply steel products and solutions that satisfy our customers and add value to our stakeholders.
- Optimise the eco-efficiency of their products through their life cycle, including increased resource and energy efficiency in the production of steel and during the use of steel products. They are committed to the promotion of the recovery, reuse and recycling of steel.
- Foster the health and safety of employees in the steel industry and provide healthy, safe, and environmentally sound operations and products.
- Demonstrate social responsibility by promoting values and initiatives that show respect for people and communities associated with our businesses.
- Conduct their business with high ethical standards in their dealings with employees, customers, suppliers and the community.
- Engage stakeholders and independent third parties in constructive dialogue to help implement sustainable development.
- Build on their knowledge of sustainability and willingly share it with others. They will be open and active in their communications and help steel companies and organisations in the supply chain implement sustainable practices.

Annex 2



Source: Eurofer, Eurostat

REPORT CARD: Refrigeration

Introduction

The International Institute of Refrigeration (IIR) is an intergovernmental organisation comprising 61 member countries representing over 80 per cent of the world's population. The IIR's mission is to promote knowledge and disseminate information on refrigeration technology and all its applications in order to address today's major issues, including food safety, environmental protection and development in the least-developed countries.

The IIR provides a wide range of services: organisation of conferences, congresses, workshops and training courses; a database (Fridoc) containing 75,000 references; numerous publications (journals, manuals, technical books, conference proceedings and information notes); and a Web site providing a wide range of information (<http://www.iifir.org>). The IIR also prepares and publishes reference documents and position statements: these are valuable tools for decision-makers worldwide.

Work in progress

What we said in 2002: continuing the sector's energy efficiency and alternative refrigerant development initiatives; expand actions designed to reduce refrigerant emissions leakage throughout the life cycle; wider diffusion of heat pump technology as an efficient tool enabling reductions in energy consumption...

Refrigeration's role in sustainable development is threefold:

On a social level

Refrigeration is one of the major job-creating sectors in many industrialised countries and employs more than two million people worldwide. While this includes skilled and non-skilled jobs, positions are becoming increasingly demanding from a technical viewpoint. Taking into account the environmental constraints linked to the refrigeration sector, several countries are starting to request certification of quali-

fications. Refrigeration corresponds to a need for all the populations of developed and developing countries: a deficient transport system or poor preservation of food are sources of sickness and death; correct storage of vaccines and of organic tissue is life-preserving. Air conditioning allows one to work and live under any conditions, in any climate. It is no longer simply an element of modern comfort. Particularly with the spread of sensitive information and communications technology, air conditioning has become progressively indispensable worldwide, in a wide variety of environments and workplaces.

On an economic level

Refrigeration is a major economic sector. Approximately one billion domestic refrigerators and freezers are currently in use, with a doubling of production in the last 12 years, and there are over 300 million m³ of refrigerated warehouses and around one million refrigerated trucks. While indispensable, the role of refrigeration is not very visible since it is only one component among numerous activities in industry, building, equipment and transport. It is also a cutting-edge sector, as is witnessed by its essential role in many key technologies: the aerospace industry (liquefaction of gases, etc.); information technologies (air-conditioning systems for computer rooms, etc.); and biology (preservation of fragile living tissues, etc.). Improvements in refrigeration production techniques thereby necessitate keen scientific and technological research, even though current research is relatively unrecognised, or wrongly assumed to be based on old technologies.

On an environmental level

Refrigeration helps humankind adapt to its environment, as was seen, for example, by the decision to mandate air conditioning units in retirement homes following the widespread health impacts of the European heat wave in 2003. However, refrigeration is also an important factor in the degradation of the environment: CFC and HCFC refrigerants have adverse impacts on the ozone layer; CFCs, HCFCs and HFCs contribute to climate change; and the electricity consumed by refrigeration equipment makes

up and estimated 15 per cent of total world consumption. The refrigeration sector in general, and the IIR in particular, is acting to mitigate the impact on the climate. Thanks to the Montreal Protocol, emissions of fluorinated refrigerants have been reduced three-fold over a 10-year period (1990–2000), reducing greatly the impact on the ozone layer. That said, much remains to be done to reduce the impact of refrigeration on climate change, including: better containment of refrigerants; the development of natural fluids with negligible greenhouse gas effects (ammonia, CO₂, hydrocarbons); and the improvement of the energy efficiency of refrigeration equipment.

Future challenges

What we said in 2002: new technology systems to reduce energy consumption by 30–50 per cent and refrigerant leakage by 50 per cent; further development of non-vapour compression refrigeration technologies and applications including absorption/adsorption and solar refrigeration; making refrigeration widely available in developing countries to set up viable cold chains, reduce food losses, support health initiatives, and encourage environmentally friendly technology transfer and training...

The range of uses for refrigeration continues to expand, while its “traditional” uses (refrigeration for food and air conditioning) have greatly expanded to meet the vital needs of an expanding population. Moreover, and this is a considerable challenge, its impact on the environment (protection of the ozone layer and global warming) must be reduced.

The refrigeration sector must develop further, with a view to sustainable development

Refrigeration, a necessity for human life in many fields (food, health, etc.), must increase its number of sustainable applications, reflecting many ongoing developments including: the production of energy through atomic fusion thanks to cryogenics (e.g. the hydrogen plasma torus ITER Project); the development of energy transport thanks to the liquefaction of gases; the expansion of cryosurgical applications; and the preservation of genetic resources.

True food chains must be implemented in developing countries

Existing supplies of refrigeration is still insufficient in order to address the food safety needs of the five

billion inhabitants of developing countries. In many regions of the world, as little as 20 per cent of perishable food is refrigerated. This leads to significant post-harvest loss and undercuts improvements in agricultural productivity. It is also a challenge in terms of public health: preventing bacteriological contamination of foodstuffs requires constant compliance with temperatures and proper control along the supply chain, from the agricultural producer to the consumer, from storage to transport and to retail sale. The safe transport and preservation of medical supplies, including particular vaccines, is also insufficient, in particular in rural areas. The implementation of effective “cold chains” to meet the vital needs of each individual and the growing populations of these countries requires the transfer of the technologies and know-how from developed to developing countries.

The refrigeration sector must meet the great challenge faced by refrigerants and energy consumption

As the main user of CFCs and HCFCs, the refrigeration sector is partly responsible for the depletion of the ozone layer. Through its use of greenhouse gases as refrigerants, and also in its use of electricity, which is produced mainly using fossil fuels, the refrigeration sector also contributes to global warming. It is estimated that 20 per cent of the impact of the refrigeration sector on global warming is caused by the emission into the atmosphere of fluorinated refrigerants and 80 per cent is due to the energy consumption of refrigeration systems.

The IIR estimates that a 30–50 per cent improvement in the energy efficiency of refrigeration systems could be obtained by 2020. Environmentally friendly technical solutions do exist, and with improved containment of fluids and a more attentive management of installations, considerable savings could be obtained. Given the seriousness of the threat, strong measures must be taken.

The International Institute of Refrigeration (IIR) believes it is urgent to:

- strengthen research and development in the field of natural refrigerants, so that they may serve as the refrigerants of reference in the near future in various refrigeration applications;
- assess, on the basis of technical research, application by application, which refrigerant options are the most environmentally and economically efficient, taking into account the total climate impact (emissions and energy consumption). In order to achieve this, the energy efficiency of installations must be codified and standardised; and

- continue to phase out CFCs and HCFCs, which have impacts on both the ozone layer and global warming.

Partnership opportunities

The refrigeration sector's vital role in achieving sustainable development—and the considerable environmental challenges it still faces—are poorly recognised. Further information and training on the effective and efficient use of refrigeration are needed, both in developed and developing countries. Research and technological development in the sector need to be strengthened, together with improved dissemination of scientific and technical information and technologies.

The IIR—at the service of its 61 member countries and of its corporate and private members—plays an indispensable role in this context, bringing together governments, universities and research centres,

public and private companies. The IIR invites all those who wish to contribute to refrigeration with a view to sustainable development to join it in this action. To this end, international co-operation with organisations such as the FAO, UNDP, UNEP, UNFCCC, UNICEF, UNIDO, the World Bank, WHO and others must be pursued and increased.

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SERVICES

The Report Cards in this chapter have been prepared by the respective business and industry groups, who assume full responsibility for the contents thereof.



REPORT CARD: Accounting

Introduction

The accounting sector has a critical role to play in helping to achieve a sustainable world, not least because economic decisions are made largely on the basis of accounting information. This Report Card intends to demonstrate the priority that the accounting sector accords the achievement of sustainable development, a priority which manifests itself in the considerable progress the sector has made in the past few years as well as the activities it has planned for the future.

Work in progress

What we said in 2002: development of international financial reporting or auditing standards dealing with sustainability issues; mostly multinationals and few smaller companies dealing with non-financial accounting, reporting and auditing issues; role of the profession in promoting SD as strategic issue in financial community...

Progress 2002–2005

Since the Enron, WorldCom and Parmalat scandals of 2001–2003, the agendas of accounting standard-setters have—not surprisingly—largely focussed on restoring confidence in the global capital markets through enhancing financial reporting. Against such a backdrop, the progress made on sustainability issues has been significant.

The International Accounting Standards Board (IASB) has issued guidance on accounting for liabilities for waste management costs (IFRIC 6). The IASB also has an active agenda project that will address the main accounting issues raised by emission trading schemes.¹ Also, the IASB has a research project that is examining the benefits of issuing a new standard or guidance for the disclosure of a “Management Commentary” to accompany financial statements. The Discussion Paper² builds on requirements in Canada, the U.S., the U.K. and Germany, and sug-

gests ways that public disclosure of sustainability risks and drivers to the extent relevant to investors’ information needs could be improved. IFAC responded to this Discussion Paper in April 2006. More information can be seen online at <http://www.ifac.org/paib>.

The International Federation of Accountants (IFAC) has also made considerable progress since 2002. It has created a “Sustainability Experts Advisory Panel” (SEAP) to advise its public interest and other committees. The International Auditing and Assurance Standards Board (IAASB), one of IFAC’s “public interest” committees, recently released a comprehensive revision of its Assurance Framework and a related standard (International Standard on Assurance Engagements (ISAE) 3000)³, which cover a wide range of assurance engagements, including those on sustainability reports. IFAC is monitoring work done on assuring sustainability reports at the national level by accountancy bodies in countries including Germany, the Netherlands and Sweden, and by the European Federation of Accountants (FEE). IFAC is also liaising with the Global Reporting Initiative (GRI) about improving the suitability of future iterations of the GRI Sustainability Reporting Guidelines as criteria for assurance engagements and recently issued a Consultation Paper⁴ on this topic.

IFAC’s Professional Accountants in Business (PAIB) Committee⁵ is also active in the area of sustainability. The PAIB Committee develops publications, including “good practice guidance,” for accountants working in business and the public and not for profit sectors. It recently approved a three-year sustainability work plan covering education and awareness building, the development of good practice guidance, research and liaison/partnership activities.

IFAC itself has recently published guidance on environmental management accounting (EMA)⁶ authored for IFAC by the Division of Sustainable

1 http://www.iasb.org/current/active_projects.asp?showPageContent=no&xml=16_178_116_02112005.htm

2 http://www.iasb.org/uploaded_files/documents/8_891_DPMComm.pdf

3 <http://ifac.org/Store/Details.tmp?SID=1141163071358587>

4 <http://www.ifac.org/Store/Details.tmp?SID=11394984882244172>

5 <http://www.ifac.org/paib/>

Development of the United Nations Department of Economic and Social Affairs (UNDESA/DSD). Another joint publication project might follow.

FEE has produced a number of publications and studies on various sustainability related topics since 2002 including sustainability assurance, greenhouse gases, emissions trading and the supply chain.⁷

National accountancy bodies are increasing their sustainability profiles. As noted above, many have either developed or are developing standards for assurance on corporate sustainability reports. A joint project of the American Institute of Certified Public Accountants (AICPA) and the Canadian Institute of Chartered Accountants (CICA) resulted in guidance on assurance regarding emissions information.⁸ In 2004 the Institute of Chartered Accountants in England and Wales (ICAEW) published *Sustainability: The role of accountants*⁹ as part of its "Information for Better Markets" project. CPA Australia (CPAA) maintains a database of sustainability assurance reports¹⁰ and, in conjunction with the University of Sydney, has recently announced a major project to improve the effectiveness of internal mechanisms for gathering data for inclusion in sustainability reports.¹¹

The Association of Chartered Certified Accountants' (ACCA) sustainability reporting award scheme¹² now runs in many countries including developing ones like Indonesia, Pakistan and Sri Lanka. In Europe, an increasing number of national accountancy bodies run domestic sustainability reporting award schemes and 15 countries participate in the European Sustainability Reporting Award programme.¹³ In 2002, the Dutch Royal Institute for Registered Accountants (NIVRA) published an international survey on "Sustainability Reporting and Assurance Engagements." Certified General Accountants (CGA) Canada has recently launched a major study of the sustainability reporting experience in Canada¹⁴ and the CICA has recently issued draft guidance about the public company disclosure of the financial impact of climate change and other environmental issues.¹⁵

Much of the activity described above is directed at listed companies and is being undertaken either by the larger accounting firms or the larger, better resourced accounting institutes. Smaller accounting practices also need to enhance their sustainability competencies. The recent award by the EU Small Facility Project to ACCA Pakistan to run a programme on communicating sustainable business practices is a rare example of the profession engaging directly with the SME community on sustainability.¹⁶

With respect to the profession playing a more prominent role in emphasising the strategic value of sustainability data, this is evident in the ICAEW and CPAA initiatives referenced above, and in publications such as the ACCA's *The Big Picture – How the envi-*

*ronment influences corporate profit*¹⁷ and FEE's *Supply Chain Key Element in the Management of Business Risk*.¹⁸

Accounting firms are also undertaking significant initiatives that establish them as key players in sustainability related services, e.g. the triennial KPMG *International Survey of Corporate Responsibility Reporting*,¹⁹ published most recently in 2005, the Deloitte *Sustainability Reporting Scorecard*²⁰ and PwC's *Sustainability Yearbook*.²¹ In 2002 Ernst & Young published a survey on corporate social responsibility within global companies and continues to do national level surveys.

Future challenges

What we said in 2002: promote introduction of sustainability issues into educational curriculum; international accounting and auditing standard setters putting sustainable development on the agenda; work with academic community to develop standardised techniques of full cost accounting and mechanisms for environmental financing...

6 <http://www.ifac.org/Store/Details.tmp?SID=1123595939318284>

7 http://www.fee.be/currentissues/default.asp?events=True&library_ref=5&category_ref=139&private=False

8 <https://www.cpa2biz.com/CS2000/Products/CPA2BIZ/Publications/Sub+4/Attest+Engagements+on+Greenhouse+Gas+Emissions+Information++SOP+No.+03-2.htm>

9 http://www.icaew.co.uk/policy/index.cfm?AUB=TB2I_71159IMNXI_71159

10 http://www.cpaustralia.com.au/cps/rde/xchg/SID-3F57FEDF-421D8CF2/cpa/hs.xsl/14131_8144_ENA_HTML.htm

11 http://www.cpaustralia.com.au/cps/rde/xchg/SID-3F57FEDF-8C1A839C/cpa/hs.xsl/1019_14967_ENA_HTML.htm

12 <http://www.accaglobal.com/sustainability/awards/>

13 <http://www.acca.co.uk/sustainability/awards/esra/>

14 http://www.cga-canada.org/web/ca_rep_2005-06_sustainability_overview.htm

15 http://www.cica.ca/multimedia/Download_Library/Research_Guidance/MDandA_Business_Reporting/English/E_CPRB_Discussion_Brief_2005.pdf

16 <http://www.euspf.org/projects.html>

17 <http://www.accaglobal.com/pdfs/environment/bigpicture.pdf>

18 http://www.fee.be/publications/default.asp?content_ref=389&library_ref=4

19 [http://www.kpmg.com/Rut2000_Prod/Documents/7/KPMG%20Intl%20CR%20Survey%202005%20\(web%20version\).pdf](http://www.kpmg.com/Rut2000_Prod/Documents/7/KPMG%20Intl%20CR%20Survey%202005%20(web%20version).pdf)

20 <http://www.deloitte.com/dtt/research/0,1015,sid%253D1084%2526cid%253D4065,00.html>

21 [http://www.pwcglobal.com/extweb/pwcpublishations.nsf/docid/2EA22C0D60C21546852570980070390E/\\$file/Sustainability_Yearbook_2005_short_version.pdf](http://www.pwcglobal.com/extweb/pwcpublishations.nsf/docid/2EA22C0D60C21546852570980070390E/$file/Sustainability_Yearbook_2005_short_version.pdf)

Progress 2002–2005

The modern accounting curriculum is crowded with many different disciplines and issues competing for attention. The International Education Standards (IES)²² issued by IFAC's International Accounting Education Standards Board (IAESB) now address sustainability issues. IES 2 prescribes the accounting and finance knowledge, plus business knowledge required of professional accountants, and now includes "the use of non-financial performance measures in business" and "an understanding of environmental issues and sustainable development." Some national accounting bodies have gone further and introduced more precise requirements identifying issues such as environmental accounting and sustainability assurance. FEE has recently conducted a survey among its members addressing environmental/sustainability issues in the curriculum.

Since 2002, emissions and futures trading schemes have been set up and pro-sustainability initiatives like the Equator (project finance) Principles launched. In this area, the accounting profession is largely represented by the "Big Four" accounting firms which all provide highly specialised advice on environmental finance issues.

Progress on developing worked-through schemes of full-cost accounting (FCA) has been slower than expected. Detailed guidance on the environmental aspects of FCA was published by the Chartered Institute of Management Accountants (CIMA) in 2002. A group of professionally qualified accountants working for the Sustainable Economy Programme of the U.K. think-tank Forum for the Future are building upon this to explore the societal dimensions of FCA.²³

A number of other relationships have been developed, for example: the aforementioned IFAC/GRI and IFAC/UNDESA partnerships; representatives from the U.K. accounting profession sit on the recently established Governmental Sustainable Procurement Task Force; and the CICA participates in Canada's National Round Table on the Environment and the Economy.

The three-year sustainability work programme announced by IFAC's PAIB Committee, mentioned above, sets out an ambitious set of partnership/liason plans, including the GRI, UNDESA/DSD, and the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting of the United Nations Conference for Trade and Development (UNCTAD/ISAR).²⁴

Finally, IFAC's Developing Nations Committee, in partnership with UNCTAD/ISAR, is assisting in the achievement of *Goal 8 of the Millennium Development Goals—develop a global partnership for development*—through its work programme aimed at fostering the accountancy profession in developing nations.²⁵

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Partnership opportunities

Formal partnerships in the accounting sector most often take the form of research activity—like the recently announced CPAA/University of Sydney initiative noted above. Many accountancy bodies have sponsored research into sustainability issues with an academic partner.

²² <http://www.ifac.org/Store/Details.tmp?SID=106636862293984&Cart=1141591592343405>

²³ http://www.forumforthefuture.org.uk/aboutus/SustainabilityAccounting_page1352.aspx

²⁴ <http://www.unctad.org/Templates/StartPage.asp?intItemID=2531&lang=1>

²⁵ <http://www.unctad.org/templates/webflyer.asp?docid=4907&intItemID=2807&lang=1>

REPORT CARD: Advertising

Introduction

This report was authored by the European Association of Communications Agencies, representing commercial communications agencies in 29 European countries. EACA members account for about 85 per cent of advertising expenditures in Europe. An estimated one million people work within the advertising agency sector in Europe. The report is endorsed by the World Federation of Advertisers (WFA), the voice of advertisers worldwide, representing 90 per cent of global marketing communications expenditures, roughly US\$700 billion per annum, through a unique, global network: 50 national advertiser associations on five continents as well as direct multinational corporate members.

Work in progress

What we said in 2002: creating wider awareness of sustainability opportunities in the business; greater understanding of benefits of CSR in communications; encourage consumers to turn interest in sustainability into lifestyle changes...

Since 2002, the sector has been active at a variety of levels in pursuing a sustainable development agenda. It has conducted conferences on sustainability for the advertising and marketing communities in at least nine countries, many of which UNEP has been invited to address. Sector representatives have spoken at more than 30 other conferences including in the U.S. and China, often related to specific sectors, e.g. travel, automotive, paper, public transport, and building and construction, using important and persuasive concepts developed from consumer research carried out in 28 countries prior to WSSD.

In line with the added interest stimulated by the raised profile of sustainability issues, new specialist agencies have begun to spring up. For example, Change Advertising in Vancouver, Canada (<http://changeadvertising.com>) and Constance Creative Marketing in Victoria, Australia. A group of agency people in the U.S. have formed Business for

Diplomatic Action to directly encourage and assist multinational companies to become more active in global problem solving.

In 2004, the European Association of Communications Agencies (EACA) in conjunction with the consultancy SustainAbility, produced "Opportunity Space," a comprehensive guide to sustainability for agencies. This also contained a "green guide" for agencies and key principles for creating successful advertising on sustainability subjects. The materials are on the EACA Web site at <http://www.eaca.be>. Since then, EACA has created an Ethical Code for advertising agencies, which makes special reference to sustainability issues and tackles many social issues within the sector. A U.K.-based agency, St. Lukes, has developed and promoted with Future Forests (<http://www.futureforests.com>) a scheme to promote the production of carbon-neutral TV commercials. In addition, the trade association responsible for Direct Marketing (FEDMA) has drafted a recommendation for all members on best practices for recycling of papers and packaging. FEDMA also works closely with the logistics sector (including post and express couriers) and follows work on sustainable practices for logistics.

The sector has instituted advertising effectiveness and creativity awards to encourage and reward achievements. The "Euro Effies" competition for effective communications has launched a responsibility category and the world's leading creative show in Cannes has run an exhibition of responsible advertising (ACT: Advertising Community Together) <http://www.adforum.com/specialevents/ACT/ACT6/tc.asp> for the last three years. In the 2005 show, 250 entries were submitted by 137 agencies in 37 countries. The ACT show then moved on to New York as part of the U.S. Advertising Week activities there. In 2004, the WFA also gave a prize for sustainable advertising during its 50 Years celebration.

In agreement with the leading advertising industry Web site, Adforum.com, EACA will create an online database of "pro bono" and CSR advertising in 2006 as a global reference and best practice resource. This initiative will give governments and others the chance to see creativity applied to a wide number of sustainability issues and a list of contacts for some of the best competencies.

McCann-Erickson has created a campaign for UNEP on a range of sustainability subjects, the first of which ran during 2005 on a pan-European basis in co-operation with the International Association of Public Transport (UITP). This was heavily supported with free airtime from international stations and has been circulated for use on a wider basis. It was created on a free-to-air basis so that any authority can use it without additional costs.

A prominent campaign was created on behalf of a consortium of international companies in support of the Millennium Development Goals. The campaign ran in Brazil during 2004 on a “We Can!” theme. It is now being further developed for a global campaign in 2006.

As a result of creative promotion of diesel alternatives, the automotive sector has reported that the image of car brands is being extensively driven by TDi and similar badges. Due to growing awareness of sustainability issues amongst consumers and within marketing communities, more sustainable products are being developed in many sectors.

For example, Toyota is placing more resources behind their Prius hybrid car. We believe in the near future, controversial SUV/MPV vehicles will be offered and promoted as hybrids by most manufacturers. Procter & Gamble is now promoting its low temperature Ariel washing powder on an environmental platform in many places and, in the U.S., has co-operated with an NGO to launch a “Cool Clean” campaign. Meanwhile Unilever continues to roll out their re-branding as an environmentally concerned company and to identify all of its sectors under this banner.

Future challenges

What we said in 2002: find brand champions for sustainability; increase funding for large scale campaigns on sustainability topics; develop more sustainable products to advertise...

Although we believe that progress since 2002 has been good, we are concerned that governments are not allocating sufficient funds for communications to address sustainability challenges. This is one of the important keys to motivating consumers. It is EACA's assessment that manufacturers will develop sustainable products faster and devote more funds to promoting both the products and their own corporate commitments if there is a higher level of consumer awareness. This does not remove the need and opportunity for manufacturers to work energetically in

a sustainable direction, but recognises that they generally do not have the resources to do both the basic education and compete successfully with products in a crowded marketplace. It is also clear that dual messaging (i.e. combining messages about improved sustainability and product performance) is still not done effectively.

EACA believes the greatest future challenge is to continue the work described above, but at the same time to secure far stronger leadership from governments, both regional and local. As an example, the EU has recently published a tender for an “EU-25 awareness campaign on climate change” on a budget of only €5 million! Such low level commitments neither encourage business to make greater efforts, nor provide them with a market of aware citizens to which more sustainable alternatives can be marketed. Although sustainable consumption cannot be bought with advertising funds, the essential foundation of knowledge and awareness can and must be built up.

The challenge is to move the sustainable development issue away from “charity” status, relying on goodwill and hand-outs. This can only happen by every government providing funds in proportion to its sustainability “footprint” and using commercial resources as the business community does. Sustainability issues are very motivating for creative and consultancy sectors like advertising, and communications professionals are motivated to create the messages. However, unless the planet's future is properly resourced, it will never be securely managed.

The belief that advertisers who spend billions of dollars on advertising can somehow be persuaded to turn over a significant proportion to promoting sustainable consumption is naïve under present circumstances. In an era of heightened consumer awareness of the issues and propensity to change behaviour, however, it could become reality. Only governments have that ability to lead.

Partnership opportunities

Partnerships, such as the one with UITP mentioned above, have been created through the UNEP Consultative Meetings and the UNEP Advertising forum. Many other liaisons have been established, such as the formation of a consortium between sustainability consultancies like ERM and SustainAbility, NGOs and advertising agencies like McCann-Erickson and Saatchi & Saatchi to manage communications tasks from governments.

To build greater capacity within the sector, there is a need to work more effectively at the level of education. The number and quality of advertising courses in

universities is already a matter of concern and being attended to by initiatives at various levels. During 2006–2007, we propose to encourage educational institutions to develop sustainability modules within communications courses, starting with an extension of the European curriculum recently developed by EACA in association with the University of Navarra.

This will require considerable partnership involvement with NGOs and UNEP to ensure correct positioning and will help to ensure that young people enter not only the agency business, but client community and other walks of life with a much higher level of awareness and expertise in this area.

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REPORT CARD: Consulting Engineering

Introduction

The consulting engineering industry consists of some 40,000 firms, whose annual turnover is US\$180 billion. It provides a broad range of technology-based intellectual services to the sectors that develop and maintain infrastructure and industrial facilities. As such, consulting engineering has a unique perspective on how sustainable development affects the operations, plans and attitudes of clients coming from the sectors that are largely responsible for achieving the Millennium Development Goals. The Consulting Engineering Industry's Sector Report for the World Summit on Sustainable Development 2002, prepared by the Fédération Internationale des Ingénieurs-Conseils (FIDIC), noted that "the industry is uniquely positioned to provide leadership in implementing sustainable development because it plays a central role in society throughout the world." FIDIC concluded that the most important issues facing the industry were: a) to enhance information and communication to increase stakeholder participation and consensus; and b) to increase technical assistance by providing resources to monitor progress toward sustainable development.

Work in progress

What we said in 2002: greater attention to stakeholder engagement in project delivery; harnessing resources of smaller companies and expanding their capabilities to meet infrastructure needs in developing countries; continually assessing performance against international commitments and the sustainable development agenda...

Following the 2002 Summit, FIDIC took a fresh look at sustainable development, and specifically at how, from a practical point-of-view, it will be achieved. The federation recognised that achieving sustainability will take many decades, essentially requiring the establishment of new infrastructure and facilities that are less energy- and resource-intensive, use less toxic materials, produce less waste and, ultimately, protect

the environment and society. Furthermore, all this must be accomplished in ways that are cost-effective and workable everywhere.

Without unprecedented multinational agreements and huge investments, it is likely that progress toward sustainability will advance incrementally, dependent upon the practitioners' ability to invent, test, and apply new, more sustainable designs and technologies on individual projects, and upon project owners' aspirations, objectives and resources.

Since 2002, the industry has made significant strides in addressing these issues through the development of Project Sustainability Management (PSM; see <http://www.fidic.org/psm>). PSM guidelines published in 2004 contain a full description of the PSM process for setting system objectives, as well as the list of PSM core goals and indicators. The process ensures that the goals are aligned and traceable to recognised and accepted society goals and priorities, and that advances in one dimension of a project's sustainability are not accomplished at the expense of other dimensions.

FIDIC based PSM on *Agenda 21*, a valid expression of the world's sustainability concerns. The process for establishing project objectives also factors in local conditions and priorities, e.g. the *Equator Principles*, to establish additional goals and indicators that reflect the concerns and policy safeguards specific to projects in developing countries. This alignment of project goals to whole-society and local goals is the first PSM principle. PSM also relates to leading sustainability reporting instruments, such as the Global Reporting Initiative (GRI), by providing specific indicators for infrastructure projects that can be consolidated in more global reports.

Most of the structures, processes, systems and technologies needed to achieve sustainability have not yet been invented. FIDIC concluded that to move forward, society must create environments that nurture innovation and trust. In such environments, practitioners would be encouraged to adopt, and project owners to apply, new approaches and technologies in order to "raise the bar" on project sustainability performance, and to create new benchmarks. To be effective, project owners, engineers, and key stakeholders will need to engage in candid dialogue throughout all the phases of a project from develop-

ment, design and delivery through to operation and de-commissioning. Meaningful engagement will require education of the principal stakeholders.

These three principles—improvement, innovation and education—are, together with the alignment of project goals, the four principles on which PSM is based. PSM represents a substantial improvement over other approaches for driving projects towards sustainability. It offers: a) a way to measure progress toward sustainability against what most nations decided were important sustainability concerns; b) a mechanism for sharing performance knowledge; and c) the benchmarking of performance, showcasing achievements in sustainability and setting goals.

The first challenge identified in the 2002 report was to increase stakeholder participation and achieve consensus. As a result, the industry has sought to ensure that PSM fully engages stakeholders throughout the life cycle of a project. In PSM, stakeholders are brought in early during the formation of the client's project vision and goals, and extending out through project design, construction and operation. PSM provides focus for this participation: it establishes a system for planning and setting up project sustainability goals that are aligned and traceable to recognised goals and priorities, and for measuring progress toward those goals, confirming that advances in one dimension of a project's sustainability are not accomplished at the expense of other dimensions.

The second challenge identified in the 2002 report is the effective monitoring of progress toward sustainable development. In order to achieve this, the dimensions of sustainable development must be established and defined by goals and indicators. Many organisations have understood that if society is to move towards sustainability, new measures and criteria on which to gauge progress will be required. Most have devised sustainability goals and indicators reflecting their own needs and perceptions. Some approaches aim to measure whole-society conditions of sustainability; others are used as investment tools in which corporate sustainable development commitment and performance are seen as leading indicators of future financial performance. Still others are used to measure corporate performance against their organisation's own interpretation of sustainable development. Finally, some have created sustainable development indicators for projects in the built environment using qualitative scoring methods to rate projects, highlight areas of exceptional performance and identify areas for improvement.

All of these approaches have an appropriate place and application. However, they do not explicitly connect projects to the fundamental issues, goals and priorities of sustainable development; none are able to provide a clear connection between the overall

goals of sustainability and the projects that can move society towards those goals. Project owners, practitioners and stakeholders have therefore had to confront a confusing array of approaches to project sustainability, each being touted as capable of providing a sound, capable gauge of progress and each largely reflecting the interests and agenda of its sponsors.

To show that a project truly and verifiably contributes to sustainable development, PSM defines a core set of goals and indicators, derived from the *UN Commission on Sustainable Development (UN CSD) goals and indicators* and *Agenda 21* recommendations. Using this core set plus any locally derived sustainable development goals and indicators, a full set of measures of project sustainability can be created for virtually any project. Such goals and indicators can be used to demonstrate and verify progress across all dimensions of sustainability. The approach specifically addresses the need for tailoring measures of progress towards sustainability to the country in which a project is based, and to the resources available in the country. For instance, a small-scale water supply project in rural Africa should be subject to PSM through a relatively small local consulting firm in the same way as PSM is implemented by an integrated design-build entity for a multi-building leisure complex in an industrialised country.

Future challenges

What we said in 2002: delivering sustainable infrastructure in developing countries requires new methods for procurement and project delivery; initiatives to generate confidence and trust from public and private stakeholders...

Our objective in creating PSM was to bring context and focus to this vast array of goals and indicators, first by showing the relationships of each to sustainability, and second, by offering a comprehensive set of goals and indicators that linked accomplishments to the priorities spelled out in Agenda 21.

The consulting engineering industry's future challenge is to create broad acceptance of PSM to fully integrate and mainstream PSM into business practice so that future projects can be judged uniformly against meaningful sustainability goals. For this it will be necessary to develop the tools and business case that allows PSM to be integrated into all the dimensions and phases of project delivery.

PSM is therefore much more than the articulation of principles and a process for setting project objectives. It aims to be a process-based management

system at the organisation level, compatible with standards-based management systems and capable of full integration with these systems. As such it not only a) articulates fundamental principles; and b) provides guidance on the processes for setting project objectives and goals; but also c) provides guidance for a management system based on the principles and covering the full PLAN-DO-CHECK-ACT quality management cycle involving policy formulation; organisation and planning; implementation; evaluation; and action for improvement covering all the dimensions of project delivery at all phases of a project's life-cycle.

A major immediate challenge will be to develop system guidelines so that organisations implementing PSM can satisfy their stakeholders through, for example, certification or peer review, that they have in place the processes and systems capable of delivering the principles of project sustainability.

The guidelines will need to be complemented by specific tools dealing with areas that are poorly developed, notably those involving project benchmarking; stakeholder engagement; definitions of the scope of a project; quantification of the financial implications of adjustment to a project's sustainability goals; and the integration of global standards for building certification, project sustainability and sustainability reporting.

Progress in mainstreaming PSM will be determined by key clients working in key sectors that impact upon the Millennium Development Goals, notably the major infrastructure sectors (housing, water and sanitation, energy, and transport) and major demand-side sectors (international lending agencies, multilateral development banks and bilateral aid agencies). Clients in these sectors require: a) procurement systems able to quantify and incorporate sustainability goals; b) improved project delivery systems; c) project sustainability indicators and benchmarks; and d) improved stakeholder engagement processes. To date, firms in several of these sectors are adopting PSM for specific pilot projects with a view to company-wide use. The industry's challenge is to continue to engage key stakeholders in each of the sectors to develop PSM tools, processes and procedures, and to provide information on the levels of awareness, levels of uptake and the impact of PSM through <http://www.fidic.org/psm>.

Partnership opportunities

To achieve broad acceptance and the full potential of PSM, the consulting engineering industry is seeking to develop and implement business practice and capacity building initiatives throughout the consulting engineering industry. For this it is able to call upon national member associations in 76 countries. FIDIC is also seeking to disseminate PSM best practice throughout the construction and infrastructure supply sector in general. The aim here is to further develop partnerships for specific activities with international non-governmental organisations and professional and trade organisations representing contractors; materials and equipment supplies; urban planners; architects; quantity surveyors and building economists; regulating bodies; and standards setting authorities.

Achieving broad acceptance of PSM will also require the support of—and promotion by—organisations that aim to move society towards its goals for sustainable development. They include UN agencies, the multilateral development banks and organisations representing sectors that provide the enabling environment for an efficient infrastructure supply, namely the insurance, legal and financial sectors in the private sector; and national research institutes and regional organisations for local and national government in the public sector.

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REPORT CARD: Finance

Introduction

The financial services sector, which includes banking, insurance and asset management, has seen a vibrant period of sustainability-related activity since the August-September 2002 Johannesburg Summit. At the same time, the nature of sustainability challenges and opportunities for the sector has evolved into a more complex set of issues. Institutions are faced with operating in a globalising economy underpinned by environmental, social, economic and human rights issues with distinct regional and, in some cases national, specificities. This Report Card provides a brief update on developments since 2002 as well as mapping out how the sector will address sustainable development challenges in the future.

Work in progress

What we said in 2002: incorporate sustainability principles into mainstream asset management; use voluntary standards and management systems to transfer knowledge to developing countries; development of universally accepted performance indicators and reporting standard through the GRI for banks, insurance companies...

Since 2002, two key challenges for the sector have included: the effective use of voluntary standards and management systems to transfer knowledge to networks and institutions in developing countries; and the development of universally accepted performance indicators and reporting standards for the global financial services industry.

Reporting: Between September 2003 and October 2004, a group of 10 financial service institutions and 10 NGOs negotiated a Global Reporting Initiative (GRI) standard covering environmental factors for the asset management, lending and insurance sectors. The pilot GRI standard was launched in October 2005 and now GRI and UNEP are working with leading financial institutions worldwide to test the new standard during the 2006–2007 sustainability reporting cycle.

Asset Management: Significant work has been undertaken by the asset management community in order to establish the materiality of social, environmental and corporate governance (ESG) issues. The key purpose of this ESG “materiality” work has been to facilitate more effective engagement on ESG issues by asset managers with corporations in which they invest. For example, in 2003 UNEP FI invited mainstream stockbrokers, including Goldman Sachs, Deutsche Markets and Nikko Asset Management, to analyse sustainability issues across seven industry sectors. This work has led to an informed dialogue on sustainability issues with the institutional investment community, including the world’s largest pension funds, foundations and special government funds. This has resulted in a partnership process, convened by the UN Secretary General in 2005, to develop a set of Principles for Responsible Investment (PRI) for institutional investors worldwide. The Principles were launched in April 2006.

Insurance: Global leaders in insurance and reinsurance have been notable for their engagement in the climate change debate, with companies such as Aviva, Axa, Insurance Australia Group, Munich Reinsurance and Swiss Reinsurance playing an influential role in bringing an insurance sector perspective to the policy arena at national, regional and global levels. Outside the climate change arena, the insurance sectors efforts to develop and market pro-sustainability insurance products and services has been more difficult and remains very much at the nascent stage.

Lending: Among the most notable developments since 2002 has been the emergence of the Equator Principles (EP), a voluntary standard covering environmental, social and human rights issues connected to project finance. From an initial four banks backing the Principles in late 2003, 41 banks representing more than 85 per cent of the global project finance market are now signatories. The EPs, and their effectiveness, are very much under the spotlight of civil society and non-government organisations. Many of the major OECD-based banks are addressing how they can embed sustainability into their core policies and practices across their main business lines. The process and institutional changes required are significant and require buy-in and support from the most senior executives within the institutions.

Future challenges

What we said in 2002: growth in socially responsible investment screening; gaps between developed and developing world standards; facing new risks related to technology developments and issues such as climate change; growing importance of issues surrounding risk information, capital formation human resources and societal expectations...

Asset Management: In the asset management community there remains limited global capacity to manage the full range of ESG risks and opportunities regarding investments. Despite the established and growing body of evidence that environmental, social and governance (ESG) issues pose material financial risks to their investments, few asset managers offer portfolio-wide solutions to such risks. Extrinsic problems arise for asset managers due to the lack of sell-side research addressing ESG issues. Until asset managers send strong financial signals to the sell-side research community, including through specific mandates, it is unlikely that ESG issues will get much attention.

Insurance: By far the greatest challenge facing the world's insurance and reinsurance industry is climate change and its associated physical impacts. Insurance relies on detailed assessment of weather and its costs in order to price risks and provide a viable risk-transfer mechanism. Many observers feel that the industry should engage more directly with government policy-makers to further highlight the mid- to long-term economic risks posed by climate change, and should be a key player in communicating the likely scale of future costs of climate change to government and business. Separately, the insurance sector faces the ongoing challenges of communicating emerging risks associated with new technologies—such as GMOs and nano-technology—while forging the risk management approaches that ensure positive momentum around technological innovation.

Lending: For banks, several priorities are evident in the coming decade. First, banks need to identify the information that is required to deal with non-financial but economically relevant sustainable development-based risks. Second, economic values based on the near future sustainability priorities need to be integrated actively into credit project and debt finance business considerations. Third, a deeper understanding is needed of who are the lending sector's new stakeholders and how they will influence the emerging sustainability agenda. Certainly many of the global banks have made impressive strides in integrating ESG concerns, both in their own operations and in

terms of the other investment chain actors they influence. Often, however, the message does not radiate outwards from headquarters to “the field.”

Partnership opportunities

As noted above in relation to the GRI, the sector has been active in encouraging practical partnerships. Opportunities for new partnerships are emerging. For example, the Principles for Responsible Investment (PRI) process is an effort, convened by the UN Secretary General, to identify and act on the common ground between the goals of institutional investors and the sustainable development objectives of the United Nations. The audience is global, with a goal of protecting the long-term interests of fund beneficiaries. Some 20 institutional investors representing US\$1.6 trillion in assets met between April and October 2005 to negotiate a set of Principles. This public-private partnership represents an important step towards fulfillment of the Principles of the UN Global Compact, the Millennium Development Goals and the objectives of the World Summit on Sustainable Development.

Another emerging partnership opportunity, notably for asset managers, is the Carbon Disclosure Project. CDP, now in its third year, has gathered asset owners and managers representing more than US\$21 trillion to press the importance of the way in which the world's 500 largest companies manage their carbon risks.

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REPORT CARD: Information and Communications Technology

Introduction

The Global e-Sustainability Initiative (GeSI¹) is a joint initiative of an international group of information and communications technology (ICT) service providers and suppliers, with the support of UNEP and the International Telecommunication Union. GeSI seeks to contribute to sustainable development in the ICT industry by taking a leadership role in collaborative exploration and responsible management of the evolving interfaces among industrial, ecological and social systems. Following up on its report for the World Summit on Sustainable Development (WSSD) in 2002,² this Report Card describes actions undertaken since then and identifies a number of areas requiring attention in the future.

Moore's law³ shows no sign of abating and the power of digital circuits has increased fourfold since 2002. The result is that telecommunication networks, computing and other technologies such as digital imaging, are converging at an accelerating pace. This brings with it a blurring of traditional boundaries at technological and company levels. Over the same period, wireless technologies have developed at a rapid pace—GSM, GPRS, Wi-Fi etc.—are all commonplace in many parts of the world, and fixed and mobile convergence is also taking place. Higher bandwidths for consumers means that computers are being used to access media previously bought in shops (e.g. music) or broadcast by radio and TV stations. This brings with it another new set of issues for the industry to address.

Reflecting this change, GeSI has grown in size and in the types of companies and organisations engaged in its work.

Combating climate change is seen not only as a corporate responsibility, but as an opportunity for the industry to provide other sectors and civil society in general with solutions that minimise consumption of energy and natural resources while reducing emissions of greenhouse gases and other pollutants. This requires a comprehensive evaluation of the real sustainable “mobility,” “dematerialisation” and “remote assistance” potential of the technology, and of applicable solutions that fit a variety of different situations.

Supply chain issues are being investigated and evaluated via specific tools that are under development. The huge spending power of the industry and the extremely articulated supplier-sub-suppliers relationships, along with the fact that production nowadays tends to be moved to developing countries due to reduced labour costs, place an obligation on responsible companies to make sure that basic human rights are respected and proper production processes are in place to protect people and the environment. The supply chain tools include:

- a supplier self-assessment questionnaire for collecting supplier CR performance data;
- a risk assessment tool and methodology to evaluate CR risks in the supply chain;
- a Web-based e-tool that will facilitate efficient information flow and management between participating companies; and
- a common auditing approach/methodology for the ICT sector when conducting supplier CR audits.

The self-assessment questionnaire was published in English, Spanish and Chinese in October 2005⁴ and covers code conformance (labour, ethics, health, safety, environment and implementation of management systems) and risk potential (hazardous material use, employment of contract workers, etc.). The work,

¹ <http://www.gesi.org>

² http://www.uneptie.org/outreach/wssd/contributions/sector_reports/sectors/ICT/ict.htm

³ *The power of integrated circuits tends to double every eighteen months.*

⁴ Available at <http://www.gesi.org/Questionner.htm>

Work in progress

What we said in 2002: growing awareness of environmental and social issues in the sector; significant reductions in resource consumption; making significant contribution to raising standards in health, education, employment and empowerment of local communities...

which is carried out in collaboration with the EICC Implementation Group,⁵ is fairly advanced, and followed with great interest by the whole industry. But GeSI believes the questionnaire may also provide a model for other industry groups grappling with similar issues.

Specific situations are also being taken into account, such as the mining of coltan (a tantalum-rich⁶ ore) in the Democratic Republic of Congo. GeSI funding has helped Flora and Fauna International investigate the conditions for a sustainable trade that improves the quality of life of the miners and at the same time protects the natural environment and the wildlife in the region. Another example is the support given to a pilot project in Senegal, aiming to establish a sustainable process for the refurbishing/recycling of used mobile phones, with the objective of contributing to the creation of skilled jobs through the training of young people, taking gender balance into account, and to the establishment of a centre of good practice, which could be a resource for the country.

Accountability and transparency are also key in building reputation and credibility, and proper indicators need to be identified that can describe the industry's social, economic and environmental footprint. After contributing to the development of the Global Reporting Initiative (GRI) sector supplement guidelines for telecommunications, GeSI has contributed to research on industry sustainability indicators. It has also identified the need for a review of the mechanism of corporate responsibility reporting in the sector especially given the level of industry convergence. A round of stakeholder consultation meetings has been organised to identify the best way forward. Overall, GeSI's focus is to demonstrate the potential of ICT services in increasing productivity, generating economic growth, job creation and employability, assisting international development, reducing environmental impacts and improving the quality of life of all.

Future challenges

What we said in 2002: getting engagement of more ICT companies; extending access to ICT services, through public-private partnerships; better integration of ICT solutions in climate change strategies; promotion of ICT as key to sustainability improvements and reporting sustainability impact on a regular basis...

Although there seems to be a broader recognition in the sector of the importance of being engaged in sustainable development, a number of companies

haven't yet committed, or have only limited commitment to a reduced set of actions. Business constraints may sometime limit a company's engagement, and the real link between business success and efficiency and sustainability is either not understood or not yet well demonstrated.

While it is important that resource consumption and emissions should be monitored and reduced by all companies, ICT companies should also be the first to apply the services they market to drive environmental improvements. This requires a change of attitude that can only be driven by proper awareness-raising efforts.

Some examples exist of partnerships between the private and the public sectors, although market constraints often pose hurdles to the deployment of ICT solutions. To address this, the industry should engage in regular and constructive dialogue with policy-makers. The former can contribute with solutions that can help the latter reach their goals in terms of sustainability, but they must create the right conditions to make things happen. ICT should be seen as a policy solution, and therefore integrated into climate change, mobility and social development policies, just to name a few.

Mobile telecoms, broadband, computing technology and appropriate skill sets are all key in narrowing the digital gap, and this applies in developed and developing countries. Access should be granted to the population, not necessarily on an individual basis, and sound business cases should be built to trigger initiatives.

Information content is also becoming more and more critical. Companies are challenged to make sure that best use is made of digital resources and the nature of some of the content transmitted over the Internet gives rise to concern. In this matter, there are very ill-defined boundaries of responsibility and a careful balance to be drawn between censorship and freedom of expression.

⁵ *The Electronics Industry Code of Conduct Implementation Group was formed in early 2005 as a collaborative effort to develop and deploy a common implementation approach around the EICC. Members share a common vision of creating better social, economic and environmental outcomes for the technology industry's supply chain while making it more efficient for suppliers to align to a single set of high standards. Member companies include: Celestica, Cisco Systems, Dell, Flextronics, Foxconn, HP, IBM, Intel, Jabil, Lucent, Microsoft, Sanmina SCI, Seagate, Solectron and Sony. The EICC IG is facilitated by BSR (Business for Social Responsibility).*

⁶ *Tantalum is used by the electronics industry to produce high precision miniature electrolytic capacitors. Because of the size and weight advantages, tantalum capacitors are attractive for portable telephones, pagers, personal computers and automotive electronics.*

Sustainability reporting should become normal practice: the number of companies that do so is growing. This is due to, among others, increased stakeholder pressure/demand and financial rating becoming more popular. Reporting should provide an accurate picture of the business and therefore be focussed on specific ICT-related issues. Identifying and agreeing on indicators in the sector and with stakeholders is not so straightforward. Developing indicators that show the sustainability impacts of ICT across society as a whole are extremely challenging to develop.

Partnership opportunities

Some stakeholder groups, like NGOs, unions and financial rating agencies, have been directly involved in specific GeSI initiatives or presentations/workshops. They have participated in the development of the GRI telecoms sector supplement, and will participate in the review of the reporting mechanism. They have been introduced to the supply chain evaluation initiative and have been asked to introduce specific problems that have been dealt with in partnership (like in the coltan case). Policy-makers and governments are stakeholder categories that should be involved more deeply in the sector's sustainability efforts, and proper co-ordination is required. Partnerships with the public sector are currently under investigation, and can be facilitated by some NGO involvement.

In the continuous effort to raise awareness and get more ICT companies on board, the GeSI is planning events and outreach meetings⁷ in different areas of the world, where goals and activities are introduced and discussed with interested parties.

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⁷ *Details can be found on the GeSI Web site,
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REPORT CARD: Postal Services

Introduction

The postal sector recognises its sustainability challenges. More than 400 billion letters, parcels, newspapers, magazines and advertising items are sent through the mail each year worldwide. Collectively, global postal services are the largest civil motor-vehicle operators in the world. Their vehicles travel millions of kilometres each year to collect and deliver mail. They operate technical systems and clean them with chemical substances. Add to this the millions of tons of paper involved in printing postage stamps and in administering and managing six million postal workers and 700,000 postal outlets all over the world, and it is clear that the world postal network handles a large portion of the world's paper.

In response, in recent years postal operators have adopted corporate responsibility policies and established environmental/sustainability project teams. In their efforts to protect the environment, postal operators are embarking on programmes for cleaner vehicles and more efficient logistics, driver training, waste reduction, environment-friendly products, recycled material, energy savings, awareness raising and sustainable purchasing.

The postal operators in charge of the universal service of the 190 United Nations member countries are united through the Universal Postal Union (UPU), a UN intergovernmental body established in 1874 with its headquarters in Bern, Switzerland. The UPU is the primary forum for co-operation between governments, postal operators and all the postal sector stakeholders, setting the rules for international mail exchanges and making recommendations to stimulate growth in mail volumes and to improve the quality of service for customers.

Work in progress

The UPU started working on environmental issues in 1994, when it issued its first environmental policy and set up a working group on Posts and Environment. In 1998, this interest in environmental protection was confirmed through the Beijing Declaration on Environmental Protection. In 1999, UNEP and the UPU signed a Memorandum of

Understanding, aimed at mutual consultation, information exchange and technical co-operation. The UPU Working Group has also published an environmental operational guide in 1999 and has conducted several symposia in order to distribute environmental knowledge in the postal world.

More recently, the UPU signed the Global Compact in 2004, committing itself and its members to advancing the Compact's 10 principles covering internationally-recognised human rights, labour, environmental and anti-corruption issues. In early 2005, the Environment Working Group was transformed into an Environment and Sustainable Development Working Group, in order to include social and economic aspects in the work. This followed the historic decision by the World Postal Congress in 2004 to make sustainable development one of the goals of the Bucharest World Postal Strategy 2005–2008.

UPU's member states now receive a regular newsletter on environment and sustainable development and have guidelines and tools for environmental protection and issues relating to social dialogue. These materials cover issues such as the impact of postal sector development on jobs, particularly in the areas of health and safety, and the development of postal employees' skills.

In 2000, about 50 postal operators had a written environmental policy. In 2003, postal services had nominated environmental contact persons in approximately 100 countries. The postal companies of many industrialised countries have an advanced environment and/or sustainability policy, and have considerably reduced their environmental impact. This relates in particular to reducing the fuel consumption and harmful emissions of postal vehicles. Posts are currently piloting the use of electric vehicles in built-up areas. However, many postal operators have not yet started working on these subjects and will need help to achieve improvements. To this end, within the framework of the activities of the Postal Operations Council, the Environment and Sustainable Development Project Group was set up. The Group's work programme includes a survey of how national postal services are addressing sustainable development. The Group will also to develop a self-diagnosis tool for posts, and hold regional seminars.

In parallel, the UPU is also making important efforts to make the postal service an essential vehicle for economic, social and cultural development. Over the period 2001–2004, 38 per cent of the UPU's own resources earmarked for technical assistance—slightly over US\$1.6 million—were dedicated to Africa, with the continent's 34 least developed countries receiving high priority. The Quality of Service Fund, set up with contributions from industrialised countries, also provided financing for 44 African projects over the past four years, representing a total of US\$3.1 million. Since the Fund was created in 2001, US\$30 of the US\$72 million collected have financed 250 projects worldwide. These projects aim to improve the quality of customer service, and also to provide postal employees with decent working conditions. These projects also include training activities designed to enhance the skills of staff.

Future challenges

The big environmental issue for postal operators is climate change and fuel consumption for their collection and distribution activities. This is also particularly important from an economic perspective in the light of ever rising fuel prices. In the coming years, postal operators will have to face rising prices, a tighter market, stricter regulations and possibly more extreme climatic conditions, in which it is more difficult to fulfil their postal tasks. The UPU wishes to launch a survey of the vehicle fleets of all postal administrations. This will enable it to draw up a "status report" on the various types of vehicles and their technical specifications (engine size, fuel, CO₂ emissions, etc.) for each postal administration over a given period. On this basis, it will be possible to launch a concrete programme to cut harmful emissions and verify the progress made after a certain period has elapsed.

Especially in developing countries, postal operators need to be informed and trained on climate change and the fight against it, but also on other environmental and social issues.

Partnership opportunities

The UPU is willing to co-operate with other groups and NGOs on its main focal points. In this regard, it should be noted that our organisation signed a co-operation agreement with Union Network International in November 2005. On the basis of this agreement, plans were drawn up:

- to organise a seminar on social dialogue in conjunction with the ILO in Tanzania in November 2005;
- to organise a seminar aimed at promoting the UPU's electronic fund transfer service (IFS), to be held in Bern in September 2006; and
- to study the possibility of jointly funding the rebuilding of a post office in Sri Lanka destroyed by the 2004 tsunami.

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REPORT CARD: Tourism

Introduction

Travel and tourism is one of the world's fastest growing industries. In 2005 it was expected to contribute to more than 10 per cent of global GDP and to account for some 221 million jobs worldwide. Over the next 10 years, the industry is forecast to grow by nearly five per cent a year. Industry bodies, such as the World Travel and Tourism Council (WTTC), continue to raise awareness of the importance of the industry and its huge potential for growth and job creation.

Below are contributions from the WTTC, and other industry contributors to the 2002 Tourism Report prepared for WSSD, which represent different phases in the tourism value chain (regional and national tour operators, cruise lines, hotels and restaurants). The contributors from Asia Pacific and the Caribbean include members that have been closely involved in the WTO/UNEP/UNESCO Tour Operators Initiative. The International Federation of Tour Operators (IFTO) represents the interests of national tour operator associations. The International Hotel & Restaurant Association (IH&RA) represents the hospitality industry worldwide. The International Council of Cruise Lines (ICCL) represents cruise liners worldwide.

Work in progress

What we said in 2002: engaging all stakeholders to fulfil travel and tourism's enormous potential to benefit host communities in developing country regions through economic growth and job creation...

The WTTC's *Blueprint for New Tourism*, launched in 2003, sets out a new vision for the industry and calls for a coherent partnership between the private sector and public authorities. It is geared to delivering commercially successful products in a way that ensures benefits for everyone. Members promote its messages and values throughout the industry. The WTTC's "Tourism for Tomorrow Awards" acknowledge leading examples of the Blueprint's values in practice under four award categories:

- Destination Award
- Conservation Award
- Investor in People Award
- Global Tourism Business Award

The IFTO has been working with the World Tourism Organisation (WTO) to develop a coherent approach to managing congestion at natural and heritage sites. Within national associations, tour operators individually and collectively have made considerable strides towards responsible tourism policies, procedures and practices, as well as implementing or funding specific projects in the developing world. Customer information encouraging responsible customer behaviour is now widely available. Training of staff has become much more widespread and proper assessment of businesses and accommodation are now carried out as a routine matter.

In 2002, the Pacific Asia Travel Association (PATA) appointed a new Committee on Sustainable Tourism. This multi-stakeholder committee seeks to encourage both destinations and enterprises to balance the environmental, socio-cultural and economic impacts and benefits of travel and tourism.

As subsidiary of the Caribbean Hotel Association (CHA) with its 35 Caribbean national hotel associations, the Caribbean Alliance for Sustainable Tourism (CAST) has continued its strategy of advancing sustainable tourism through standards and certification. This includes its home-grown Quality Tourism for the Caribbean (QTC) programme, through which CAST and the Caribbean Epidemiology Centre (CAREC) have developed a food safety standard and six environmental performance standards. The *Performance and Leadership Program (PLP)* of CAST provides a mechanism for monitoring and evaluating environmental and social improvements made to regional tourism business operations.

In 2005, the IH&RA set up a series of Global Councils designed to promote discussion and action on key issues. They bring together corporate and national association members from around the world as well as outside experts. One of these Councils is specifically devoted to Corporate Social

Responsibility. IH&RA runs an *Annual Environmental Award* that recognises best practice in industry initiatives to promote environmental action and awareness at both the corporate and individual property level. It also developed with UNEP an *Environmental Teaching Pack for Hospitality Professionals*, a complete information manual for developing and expanding environment curricula in hospitality education centres. As a founding member of the WTO Task Force to combat the commercial sexual exploitation of children in tourism, a number of IH&RA members have signed the *Code of Conduct for the Prevention of Sexual Exploitation of Children in Tourism*.

In December 2003, the ICCL and Conservation International announced the creation and funding of a major joint initiative, the Ocean Conservation and Tourism Alliance (OCTA). This alliance focuses on the protection of biodiversity in top cruise destinations and the promotion of industry best practices to minimise the cruise industry's environmental impact. OCTA's priority is on tourism and biodiversity issues. Approximately 70 per cent of cruise destinations are in so-called "biodiversity hotspots." The Alliance seeks to leverage cruise tourism as a force for biodiversity protection in these critical zones. OCTA has established four initial priority areas: Best Practices for Wastewater Management; Promoting Environmental Education; Establishing Destination Partnerships; and Promoting Vendor Environmental Education.

Future challenges

What we said in 2002: commitment to ensure travel and tourism benefits all and is sustainable, integrating all pillars of sustainable development...

In a globalising world economy, the travel and tourism industry faces a number of emerging global challenges. Crisis management has become vital to the stability and resilience of the industry, and the livelihoods of those who depend on it. The Crisis Communications Committee of the WTTC is called immediately after an event such as terrorist attack or natural disaster. The aim of the Committee is to get first hand knowledge of what is happening on the ground in order to ensure accurate and timely communications.

Promoting responsible development and reducing over-exploitation in emerging destinations remains a challenge in the developing world. Destination countries widely recognise that it is in their interest to encourage tourism development for the income and

jobs the sector creates, while ensuring that social and environmental issues are addressed through planning restrictions, protection measures and limits based on sound environmental and social impact assessments. Subject to the level of destination maturity, a key challenge for PATA is to assist Asia Pacific destinations and tourism-related businesses to recognise the value of sustainable tourism certification options. A second is to improve the integration of the "mainstream" industry in making tourism work better for poverty alleviation in the developing countries of Asia Pacific. During 2006–2007, with IADB-MIF support, CAST will be seeking to turn the standards developed with its partners (CAREC and others) into regional health, safety and environment standards. It is also seeking to surmount the challenges faced in obtaining greater take-up of its performance and leadership programme by Caribbean tourism businesses, including activities such as "environmental walk-throughs". The latter involves a service that provides rapid assessments of property operations with recommendations for adopting best practices leading to immediate savings in energy and water consumption.

In the hotel and restaurants sector, the IH&RA has focussed on raising awareness by consolidating and showcasing best practice and promoting environmental education. Today, with the creation of Global Councils and solicitation of support from major corporate sponsors, the IH&RA aims to be in a position to spearhead worldwide programmes supported by its member associations. These will be channelled through the IH&RA's charitable arm, its *Foundation for the Future*.

For the ICCL, a major challenge is to spread best practices. Advanced wastewater purification research and development has, for example, been a strong focus for the cruise industry. To date, the combined efforts of the cruise industry and wastewater treatment vendors have resulted in rapid technological advancements and the installation of several prototypes on more than 40 ships at a cost of more than \$100 million. Another challenge is promoting education. Through OCTA, the ICCL and Conservation International are working to develop appropriate education and awareness materials for cruise passengers and crew. OCTA is applying its resources to support the Responsible Marine Tourism Initiative of Conservation International. This initiative brings together marine recreation providers, their major contractors and other interested parties to implement and monitor responsible marine recreation. Another area of significant importance for OCTA is to gain support for destination partnership programmes and supply-chain best practices. Local government and vendor participation in these programmes is key to their success.

Partnership opportunities

The IFTO will encourage its members to integrate responsible tourism practices into all facets of their operations and will continue to give advice and support to destination countries so that they adopt practical policies. Both China and India are rapidly developing outbound markets to other destinations in the Asia Pacific region, as well as continuing to build infrastructure for inbound markets. PATA acknowledges the strategic future position of both countries to global tourism and the need to contribute to information and best practices on sustainable tourism in the development of these fast growing markets.

Awareness and preparedness for natural disasters present a critical partnership opportunity in the tourism field today. This has been clear from experience in regions such as the Asia Pacific over the last two years. Given the devastation suffered by many destinations in the Caribbean region during 2004, the CAST *Hurricane Preparedness Workshops* have been in high demand. The IH&RA is also expanding its involvement in the efforts related to awareness and preparedness for natural and human-made disasters. Its *Global Council on Risk & Crisis Management and Communication* serves as a vehicle for identifying and consolidating expertise in disaster management and prevention. Closer involvement and partnership with the UNEP Awareness and Preparedness for Emergencies at the Local Level (APELL) process is currently under discussion to ensure maximum cooperation with hospitality industry partners in local destinations.

Accountability and transparency in performance is another new partnership area addressed in the Caribbean region. CAST is finalising a CSR reporting framework for the Caribbean tourism business. A reference for this is the tour operators' supplement to the Global Reporting Initiative (GRI) *Sustainability Reporting Guidelines*. The objective is to assist the tourism private sector through the challenging process of becoming increasingly transparent with their environmental and social performance results. CAST is seeking support and assistance from a range of regional and international alliance partners in this process.

In the area of emerging partnerships, the ICCL has innovative examples from Belize, Cozumel and Grand Cayman in support of local level entrepreneurship. For example, under and Inter-American Development Bank (IDB) project, the Belize Tourism Industry Association (BTIA) and the Belize Tourism Board (BTB) are helping micro and small enterprises and community-based organisations to offer sustainable tourism products and to improve their competitiveness in integrated tourism business chains.

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LABOUR

This Report Card in this chapter has been prepared by the relevant business and industry group, involving two labour organisations who assume full responsibility for the contents thereof.



REPORT CARD: Organised Labour

Introduction

Workers worldwide are using their unions in an ongoing effort to give a human face to industrial development. This process is supported by a global network involving local unions, national, regional and international federations and confederations. The term “Global Unions” includes the International Confederation of Free Trade Unions (ICFTU) and the World Congress of Labour (WCL), which together represent most national trade union centres, along with the Trade Union Advisory Committee (TUAC) to the OECD. It also incorporates 10 sector-specific Global Union Federations (GUFs) involving education; chemicals and mining; journalism; garments and textiles; public services; transportation; wood and forestry; metals; agriculture and tourism; as well as professional and clerical office workers (for full names and composition see <http://www.global-unions.org>). Together, these bodies represent nearly 200 million workers in about 160 countries.

The ICFTU and TUAC were the leading trade union organisations at the 2002 World Summit on Sustainable Development (WSSD). It was in Johannesburg, at the labour conference “Fashioning a New Deal” jointly hosted with UNEP and the ILO, that they agreed with UNEP and ILO to fashion joint workplace approaches for implementing labour, environment and sustainable development objectives in the long term.

Work in progress

Immediately following WSSD, labour unions joined UNEP in hosting a workshop for the Asia Pacific region on the use of workplace assessments to promote sustainable development at the shopfloor level. Union leaders also participated in interviews for the completion of a study on *The Role of Labour Unions in the Process Towards Sustainable Consumption and Production*, published by UNEP in 2004. Most importantly, follow-up to WSSD was given a tremendous boost by the hosting of the WILL 2006 Labour and Environment Assembly at UNEP headquarters in January 2006, hosted by ICFTU, TUAC, UNEP, ILO, and co-ordinated by the

Sustainlabour Foundation. Many case study presentations from all regions showed how unions are working with other stakeholders in promoting different aspects of sustainable development. The meeting resulted in a declaration calling for follow-up action, involving the host organisations and others such as the World Health Organization (WHO), in areas such as climate adaptation strategies, responsible chemicals management, equitable trade as well as enterprise social responsibility.

The objectives agreed at WSSD in 2002 embody a number of employer accountability issues that trade unions consider important. Hence, since WSSD, the TUAC has developed and maintains a special database of information about more than 500 enterprises and the agreements onto which they have signed. This information forms part of a larger trade union country-by-country data gathering process focussing on the themes of sustainable development, asbestos, climate change, HIV/AIDS, occupational health and safety, trade union rights and country oversight of corporate behaviour. These databases provide a user-friendly source for union members, analysts and the public to compare the state of play in implementing sustainable development instruments, including key labour and environmental conventions, in different countries. It also provides a quick reference to track progress by corporations in meeting principled obligations they made under initiatives such as the UN Global Compact and cases raised under the OECD Guidelines for Multinational Enterprises.

The attached sample lists in Annex 1 provide a summary of a special type of agreement that 42 companies have signed onto. These are “Framework Agreements” made with selected Global Union Federations (GUFs). Since WSSD these are considered to be an emerging type of agreement, sometimes referred to as a form of international collective agreement that is concerned with social and governance aspects of sustainable development. These aspects include worker participation and rights. Framework Agreements between a corporation and union federation reinforce local practices and ensure consistency with internationally agreed standards on freedom of association and collective bargaining. They also provide a good illustration that industrial relations mechanisms can introduce other issues

such as environment and human rights issues into company and trade union engagement processes. Global Framework Agreements have therefore become another, emerging form of formal engagement between unions and companies that, while focussing on labour rights, may also include environmental provisions, human rights provisions and corruption provisions promoted under the UN Global Compact.

Future challenges

The tracking of company and employer organisations by TUAC aims to establish more reliable monitoring and reporting of progress, related to many types of agreements, including the UN Global Compact, GRI, OECD Guidelines on Multinational Enterprises, and other codes or initiatives covering social and environmental criteria. This monitoring has the aim of improving the degree and quality of worker participation in workplace decision-making and trade union involvement in community policy development and implementation. It also aims to identify how to implement integrated sustainable development approaches through concrete enterprise level policies and actions that include employment promotion for poverty eradication.

Under the umbrella of ICFTU, TUAC and others, unions continue to work with the ILO and UNEP to promote clarify joint approaches over the longer term. The *WILL2006* Trade Union Assembly on Labour and the Environment include presentation of 20 case studies from all regions and discussions in working groups on challenges related to “climate and energy policies”; “chemical risks – hazardous substances in the workplace”; “equal and sustainable access to resources and services”; “corporate social responsibility and accountability”; as well as “occupational, environmental and public health – asbestos and HIV/AIDS.” The resolution concluding the Assembly listed agreed objectives. These include:

- strengthening the link between poverty reduction, environmental protection and decent work;
- integrating the environmental and social dimension of sustainable development with a rights-based approach;
- introducing policies for just employment transition as a central feature of environmental protection; and

- enhancing dialogue between labour and management, consultation and negotiation in the workplace on sustainable development.

To accomplish these, the declaration recognised the need for a commitment to activities such as “capacity building and training programmes to advance integration” and “endeavours, together with civil society allies, to encourage workplace and community action and awareness raising.” Union leaders also welcomed the undertaking by UNEP, ILO and WHO to start joint activities for promoting capacity building and training in the areas discussed. Some critical statistics remind us of the challenge of integration we face in addressing both human and environmental health. Each year, over two million women and men die as a result of 270 million occupational accidents. The ILO and WHO estimate that occupational diseases alone cause over 1.7 million deaths. It is furthermore estimated that over half of the 355,000 on-the-job fatalities occur in agriculture, the sector with half the world’s workforce. Other high risk sectors are mining, construction and commercial fishing. Four per cent of the world’s gross domestic product is lost through absence of work from injury, death and disease, sickness treatment, disability and survivor benefits. Illness results in a loss of four or more working days in at least one-third of all cases. Each year, hazardous substances kill an estimated 340,000 workers (see relevant ILO data at <http://www.ilo.org/public/english/dialogue/actrav/new/april28/facts04.pdf>).

The undertaking by UNEP, ILO and WHO for new joint activities in the field of capacity building can follow up on the call in the JPoI, Chapter III on Consumption and Production, for “workplace-based partnerships and programmes, including training and education” (par 17d). Workplace assessments can be introduced at the shopfloor level, between several plants, or for an entire region. Their checklist evaluations can lead to the adoption of programmes addressing concerns such as water and waste, energy efficiency, health and employment provisions. Training and education at the plant level on these issues can be targeted at both worker or employee representatives and operational managers. Moreover, they can be used to promote the inclusion and practical application of environment, chemicals and health-related issues in agreements such as the Framework Agreements.

Partnership opportunities

The WILL2006 Labour and Environment Assembly Resolution is available online at <http://www.WILL2006.org> and at:

English: http://www.global-unions.org/pdf/ohsewpO_6d.EN.pdf

Français: http://www.global-unions.org/pdf/ohsewpO_6d.FR.pdf

Español: http://www.global-unions.org/pdf/ohsewpO_6d.SP.pdf

The resolution emphasises the need to enhance social dialogue at the sectoral, national and international levels in both public and private sectors, to use appropriate tools to increase social and environmental responsibility and accountability of enterprises through both trade union and multi-stakeholder participation in genuine initiatives. The aim of these bilateral, trilateral and multi-stakeholder initiatives and partnerships should also be to ensure that enterprise social responsibility involves compliance with the law plus voluntary action. Against this background, we remain ready to work with the relevant UN agencies and other stakeholder organisations in a partnership manner to advance the objectives referred to above. In doing this, we will also be working with the Sustainlabour Foundation in doing capacity building activities such as climate change adaptation workshops for worker representatives that we presented at recent meetings (Buenos Aires, Montreal) of the Climate Change Convention. Furthermore, openness

by more corporations to join unions in Framework Agreements that also incorporate issues such as environment, chemicals, HIV/AIDS and human rights can make an important contribution.

TUAC is currently also endeavouring with the Business and Industry Advisory Committee (BIAC) to the OECD, clarifying the possible elements of successful voluntary agreements that could help implement the OECD's Environment Strategy. Initial discussions have been held at a TUAC-BIAC dialogue in a meeting organised by the OECD secretariat in March 2006. There was general agreement that a dialogue of this nature ushers the beginning of a new process among trade unions to explore with employers novel ways of promoting changes to production and consumption patterns worldwide.

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Forty-two Industry and Sector Framework Agreements and their provisions

SECTOR: CHEMICAL, ENERGY, MINING						
TRADE UNIONS COUNTERPART: Int. Federation of Chemical, Energy, Mine and General Workers' Union (ICEM)						
Company	Environment	Chemicals	SD	OHS	HIV/AIDS	TUR
NORSKE SKOG				√		√
STATOIL	√			√	√	√
RHODIA	√	√		√		√
SVENSKA CELLULOSA	√			√		√
FREUDENBERG	√			√		√
EDF	√		√	√		√
ENI	√		√	√		√
ANGLOGOLD	√			√		√
ENDESA				√		√
LUKOIL	√			√	√	√
LAFARGE				√	√	√

SECTOR: CONSTRUCTION – ENGINEERING						
TRADE UNION COUNTERPART: International Federation of Building and Wood Workers (IFBWW)						
Company	Environment	Chemicals	SD	OHS	HIV/AIDS	TUR
STABILO				√		√
IKEA	√	√	√	√		√
BALLAST NEDAM						√
FABER-CASTELL				√		√
IMPREGILO	√			√	√	√
VEIDEKKE	√	√		√	√	√
SKANSKA				√		√
HOCHTIEF						√

SECTOR: DIVERSIFIED INDUSTRIAL						
TRADE UNION COUNTERPART: International Metalworkers' Federation (IMF)						
Company	Environment	Chemicals	SD	OHS	HIV/AIDS	TUR
MERLONI ELETTRODOMESTICI						√
LEONI						√
SKF				√		√
VOLKSWAGEN				√		√
EADS	√			√		√
DAIMLER CHRYSLER				√		√
GEA	√			√		√
RHEINMETALL	√			√		√

Company	Environment	Chemicals	SD	OHS	HIV/AIDS	TUR
RENAULT IFA				√	√	√
BMW				√	√	√
BOSCH	√			√		√
PRYM				√		√
ARCELOR	√			√		√

SECTOR: FOOD, TOURISM						
TRADE UNION COUNTERPART: Int. Fed. of Food, Agriculture, Hotel, Restaurant, Catering, Tobacco & Allied Workers' (IUF)						
Company	Environment	Chemicals	SD	OHS	HIV/AIDS	TUR
ACCOR						√
FONTERRA						√
CHIQUITA	√			√		√
DANONE				√		√
CLUB MEDITERRANEE						√

SECTOR: COMMERCE, ELECTRICITY, FINANCE, MEDIA, TELECOM, TOURISM						
TRADE UNION COUNTERPART: Union Network International (UNI)						
Company	Environment	Chemicals	SD	OHS	HIV/AIDS	TUR
ISS	√			√		√
OTE	√			√		√
CARREFOUR						√
TELEFONICA	√			√		√
H&M						√

<p>SOURCES</p> <p>International Federation of Chemical, Mine and General Workers' Union (ICEM) http://www.icem.org/</p> <p>International Federation of Building and Wood Workers (IFBWW) http://www.ifbww.org/index.cfm?n=2&l=2</p> <p>International Metalworkers' Federation (IMF) http://www.imfmetal.org/main/index.cfm?n=10&l=2</p> <p>International Federation of Food, Agriculture, Restaurant, Catering, Tobacco & Allied Workers' (IUF) http://www.iuf.org/en/</p> <p>Union Network International http://www.union-network.org/</p>

AN UPDATE FROM UNEP



Taking Action on What We Said in 2002: An update from UNEP on its activities in the field of technology, industry and economics

The UNEP overall assessment report of 2002 concluded with five recommendations on the way forward. Next to these were also listed commitments by UNEP for its work programme in the fields of technology, industry and economics. Below follows highlights from our progress towards those commitments over the last four years. The text focuses on activities involving work directly with business and industry. It cannot cover all activities, but gives a sample of highlights related to the five recommendations.

1. Mainstream decision-making: *Initiate a sustainable consumption and production (SCP) programme that promotes environmentally sound practices and provides capacity building assistance to developing countries and countries with economies in transition.*

Working closely with UNDESA and supported by the UNEP Governing Council, we organised in 2003 a global meeting in Marrakech, Morocco, to follow up on the WSSD call for a 10-year Framework of

Programmes on SCP. During the same year, four regional meetings were held in Argentina, Indonesia, Nicaragua and South Korea. The outcome of this series of meetings was the Marrakech process on SCP. The year 2004 saw the launch of a UNEP-UNDESA Web site dedicated to the process, as well as regional, multi-stakeholder roundtables held in Africa (Nairobi) and Europe (Ostende).

With the second international review meeting, held in September 2005, and other regional meetings (Belgium, Germany, Morocco and Kenya) activities in the Marrakech process moved from the consultative phase into an implementation phase. We invited governments to take on country-led task forces. Today we have six country-led task forces dealing with sustainable lifestyles, sustainable products, sustainable procurement, building and construction, tourism, and co-operation with Africa. In 2005 we established in Germany the UNEP/Wuppertal Institute Collaborating Centre on Sustainable Consumption and Production (CSCP). The aim of the centre is to strengthen the scientific base for a “human development through the market approach,” building on the linkages between



Monique Barbut, Director of UNEP DTIE with Klaus Toepfer, UNEP Executive Director at the UNEP Global Ministerial Environment Forum in Dubai, February 2006. Photo courtesy IISD/Earth Negotiations Bulletin

the SCP and poverty eradication agenda. A joint programme with the European Commission (EC) has been developed to undertake, among others, outreach events in India, China, South Africa and Brazil on the use of directives for SCP, as well as establishing a joint International Resource Panel.

Capacity building remains a central feature of our work in the field of SCP, promoted under the UNEP Bali Strategy on Capacity Building and Technology Support (2004). Through our UNEP/UNIDO network of National Cleaner Production Centres (NCPCs) in developing countries and transition economies, we continued to present trainings for managers in areas such as cleaner production, environmental management systems, energy efficiency assessments, waste management and Design for Sustainability (D4S). In 2004 we joined UNIDO and the Wuppertal Institute in the development and launching of the Environmental Management Navigator, a Web-based diagnostic tool targetted at small and medium-sized enterprises. In 2005 our Life Cycle Initiative launched an award scheme under which major software providers offer free LCA software tools for users in developing countries. Rolling out training materials as a rule also involves developing new language versions, such as the Spanish language edition of the *Training Resource Pack for Hazardous Waste Management* that we published in 2004.

Our biennial High Level Seminars on SCP held in Prague (2002) and Monterrey (2004) as well as our annual Consultative Meetings on Business and Industry continued to attract from 100 to 300 participants from between 50 and 100 countries and involving, among others, a network of over 40 international industry associations. Our international meetings are complemented by local level demonstration projects, projects through which we have increased the focus on implementation and meeting Millennium Development Goals in developing countries. Following the pilot demonstration model of our Rural Energy Enterprise Development (REED) programme, these include circular economy projects in Guiyang, China, and waste management projects on electronic waste in India. Another example is site demonstrations of our Awareness and Preparedness for Emergencies at the Local Level (APELL) programme in, for example, Peru, Brazil and Sri Lanka. Responding to post-tsunami reconstruction, we have worked with partners and used events such as the World Conference on Disaster Reduction (Kobe, 2005) to promote greater synergy between prevention, preparedness and response to environmental emergencies and industrial disasters.

2. Improve voluntary initiatives: *Catalyse global voluntary initiatives and partnerships with multi-stakeholder involvement, supporting also the UN Global Compact and encouraging industry to report progress at events such as our annual consultative meetings.*

Over the last four years, we continued voluntary and partnership activities with industry sectors such as finance, information and telecommunications technology, advertising and communications, tourism, automotive manufacturing, mining, oil and gas, and retail industry. A recent addition has been our Sustainable Building and Construction Initiative (SBCI), which held its launch meeting in 2006. As is the case with the other initiatives, the aim here is to involve a group of leading companies in a collective effort to address common challenges and do demand-driven projects that demonstrate corporate commitment to sustainable development in the field. A good example of this can be seen in the Global e-Sustainability Initiative (GeSI). Led by industry in partnership with UNEP and ITU, ICT companies under GeSI have been developing a suppliers sustainability questionnaire for common usage in their industry, supported by a shared, Web-based data gathering system.

New initiatives also took the form of innovative technology partnerships with companies to address both ozone depletion and climate change. UNEP, along with Greenpeace, supported the *Refrigerants Naturally Initiative*, an alliance of major companies promoting a shift in cooling technology in the food and drink, food service and retail sectors towards alternative refrigeration technology. Also, in partnership with private companies and other stakeholders, UNEP has helped co-ordinate a global initiative to develop a climate- and ozone-friendly vaccine cooler: the *Solar Chill* technology. The vaccine-cooler is powered by solar energy and the technology is publicly available to support, for example, communities in rural areas. It was one of the technologies displayed at the EST Showcase exhibit that we hosted in Dubai at the UNEP Global Ministerial Environment Forum in February 2006.

Promoting voluntary initiatives and partnership also involved joining fellow international organisations and UN agencies in joint projects. A notable example has been the UN Global Compact. Following the joint launch of responsible investment reports at the Global Compact Leaders Summit in 2004, the UNEP Finance Initiative (UNEP FI) and the Global Compact Office have been working jointly in developing the Principles for Responsible Investment (PRI) initiative.

This resulted in some of the world's largest pension funds committing themselves to agreed PRI, launched at the New York Stock Exchange in April 2006. At its Global Roundtables, UNEP FI involved financial professionals in discussing new developments in its work activities, including asset management, climate change, biodiversity, sustainability reporting and micro-finance.

Another joint project with the Global Compact related to our work in promoting sustainable lifestyles. In 2004 we co-hosted a Global Compact Policy Dialogue on "Sustainable Consumption: Marketing and Communications." This resulted in the development of the publication *Talk the Walk*, with a range of practical company examples of (ir)responsible marketing and advertising, which was launched at the Global Compact China Summit in 2005. For the Summit, we facilitated the organisation of four environmental panel discussions, addressing for example climate change and sustainable cities initiatives. We also launched a new Global Compact Environment Principles Training Package in English and Chinese (Mandarin). Over the last four years we represented the Global Compact at many international conferences on CESR and joined the International Organisation for Standardisation (ISO) process to

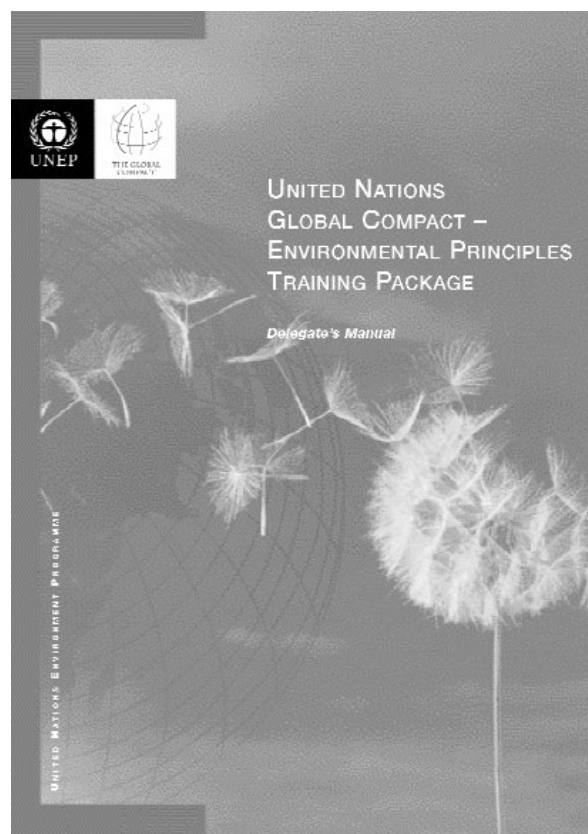
develop a standard on social responsibility. We addressed UN facilities managers at their network meetings in 2004 (Beirut) and 2006 (Addis Ababa) on internalisation of the Global Compact principles in the UN system. Our focus is on environmental management at UN facilities and sustainable procurement, on which we developed guidance materials in co-operation with UNDP/IAPSO and the World Bank.

3. Reporting: Support the establishment of the Global Reporting Initiative (GRI), encourage sustainability reporting and support regular benchmarking of corporate and industry reporting.

While at the start of 2003 the number of companies that used the GRI Guidelines comprehensively was just over 150, by 2006 there were over 800 self-declared GRI reporters worldwide. We have been closely involved in the establishment of the GRI as a permanent institution in 2002, based in Amsterdam. Since then, we have served on the 16-member GRI Board and as observer on its Stakeholder Council, whose 60 members represent all geographical regions and stakeholder groups. We supported



UNEP/UN Global Compact/Utopies "Talk the Walk - Advancing Sustainable Lifestyles through Marketing and Communications" (2005). See online at: http://www.unep.fr/pc/sustain/advertising/events_specifics/Talk_the_Walk.htm



The Global Compact Environmental Principles Training Package, UNEP/UN Global Compact (2005). See online at: <http://www.unep.fr/outreach/compact/trainpack.htm>

development of the GRI Guidelines through our involvement in its expert working group activities and support in organisation outreach events in all regions. This included processing funding from the UN Foundation, for example to ensure participation by stakeholders from developing countries. Mindful of developing country needs, we also joined the development of the *High 5! Guidebook* that introduces SMEs to the GRI Guidelines.

Through our sectoral voluntary initiatives and a dedicated session at our 2003 Consultative Meeting on Business and Industry, we catalysed the development of GRI Guidelines supplements for sectors such as finance, tourism, telecommunications, automotive manufacturing, logistics and mining. In addition, we continued our Engaging Stakeholders programme with SustainAbility Ltd. by publishing the biennial Global Reporters Benchmark Survey in 2004 and 2006. The value of this series received recognition in the form of media coverage including an editorial in *The Economist* magazine. Over the past four years we also promoted use of GRI reporting indicators by companies doing Communications on Progress under the UN Global Compact. Mindful of growing governmental interest, in 2005 we hosted a workshop with governments of OECD countries as well as Brazil, South Africa and India on reporting legislation trends.

A critical review of the GRI process, which we launched in 2005, serves to support the launch of a more focussed G3 version of the Guidelines in

October 2006. The G3 revision process of 2004–2006 involved over 100 experts in technical working groups. It was preceded by a Structured Feedback Process which included consultative meetings with stakeholders held in Belo Horizonte, New York, Melbourne, Hong Kong, Tokyo, Johannesburg and Geneva.

4. Integration of social, environmental and economic issues: *Continue the “Industry as a Partner for Sustainable Development” dialogue, involving business, labour and other stakeholder organisations to address complex issues—including corporate environmental and social responsibility (CESR) expectations—in different contexts and in a holistic, integrated approach.*

The presentation of this publication is an affirmation of our continuation of the “Industry as a Partner for Sustainable Development” dialogue. Through our annual meeting with business and industry, including labour and related stakeholders, we have continued to encourage pro-activeness, measuring and communicating progress by industry sector organisations.

At our 2005 Consultative Meeting on Business and Industry, we celebrated the thirtieth anniversary of the UNEP Division of Technology, Industry and Economics (UNEP DTIE). Its creation was a consequence of the 1972 United Nations Conference on



Achim Steiner and Klaus Toepfer, incoming and outgoing Executive Directors of UNEP in 2006. Photo courtesy IISD/Earth Negotiations Bulletin

the Human Environment (UNCHE). Soon after UNEP headquarters were established in Nairobi, Kenya, it appeared that promoting environmental care in industrial development required the creation of an office that would be dedicated to deal with industry. The result was the creation in 1975 of what was then called the UNEP Industry and Environment Office. As we look back at our work over the years, including the launch of a cleaner production programme in the 1980s and a sustainable consumption programme in the 1990s, the growing prominence of life cycle management, sustainable life style, and corporate environmental and social responsibility approaches in recent years signalled the ongoing challenge of improved integration. This also requires working with fellow UN agencies such as ILO (workplace environment, health and safety); UNCTAD (capacity building in environment, trade and development); UNDESA (Commission for Sustainable Development); UNDP (field projects, partnership development); UNESCO (tourism, youth and education); UNIDO (SCP, SMEs); UNWTO (tourism); and the WHO (SCP, chemicals management and health). The Labour and Environment Assembly, hosted in 2006 at UNEP headquarters with the ILO and International Confederation of Free Trade Unions, concluded with a call for various co-operation activities between UNEP, ILO and WHO. The resultant activities will follow the integrated approach to implementation of basic environment and labour principles that we promote in our CESR activities.

In the last four years, we have also supported analysis and development of guidance on stakeholder engagement. The *Stakeholder Engagement Manual* that we published in 2005 with SRA and AccountAbility included a volume with a collection of experiences as recollected by participants from industry associations, companies, labour unions and NGOs during interviews conducted during 2002 and 2003. Our next goal is to demonstrate application of the Manual Guidebook—available in different languages—at the site level. In another partnership initiative with a local level implementation focus, we are working with the UNDP and IUCN under The Seed Initiative to promote partnerships advancing the goals of the Millennium Declaration and WSSD Plan of Implementation. We co-launched the initiative at the World Economic Forum and World Social Forum in January 2003. The first Seed Awards attracted over 260 submissions from emerging partnerships in 71 countries. The Seed Partnerships Report launched at CSD14 included a progress report on the award winning partnerships in Bolivia, Cambodia, Madagascar, Nepal, Nigeria and Sri Lanka.

Since 2002 we expanded our capacity to promote integration and policies that place energy and trans-

port in a broader sustainable development context, steering project developers and the investment community towards greater engagement in renewable energy and energy efficiency. We launched the Sustainable Energy Finance Initiative (SEFI) and a network of now over 20 centres of excellence in all regions under the Global Network on Energy for Sustainable Development that we launched at WSSD. Our Mediterranean programme to promote renewable energy technologies has demonstrated how local economic, social and environmental needs can be addressed in an integrated and market-based manner. Supported by this programme, over 5,000 households in Tunisia have been equipped with solar water heaters.

5. Global responsibilities and opportunities:

Work with governments, business and industry and related stakeholders to improve international environmental governance and implementation of multilateral environmental agreements, encouraging more business leadership and responsibility in meeting global sustainable development goals.

The Business UNusual partnerships report prepared for the 2005 World Summit noted that voluntary partnership initiatives to develop norms and standards “often respond to the failure of traditional governance mechanisms to come up with effective, binding frameworks.” Clearly, voluntary partnerships, economic instruments and regulatory frameworks need to complement each other. During the last four years, we continued the organisation of capacity building workshops and publication of reports on the use of economic instruments. We have also remained directly involved in the operation and support for implementation of the conventions related to the ozone layer and chemicals. The latter involves the Prior Informed Consent and Persistent Organic Pollutants conventions, both of which entered into force in 2004. This enabled us to play a key role in supporting rationalisation and advancing implementation of conventions in a clustered approach. Under the Green Customs Initiative, we have been able to use our position as co-ordinator to address integrated capacity building of customs officials in matters related to transboundary movement of both ozone depleting substances (Montreal Protocol), hazardous wastes (Basel Convention), chemicals (Rotterdam and Stockholm Conventions) and endangered species (CITES). In 2005, training workshops were held in Bhutan, Georgia, Syria, Tanzania, and Trinidad and Tobago. In combating illegal trade in ozone-depleting substances under the Montreal Protocol,

our Compliance Assistance Programme has encouraged the development of public-private dialogue through consultative workshops held in Hua Hin (2004) and Caracas (2005). For its ongoing work in supporting a network of National Ozone Units in the governments of over 140 countries, our OzonAction programme received the USEPA Stratospheric Ozone Protection Award in May 2005.

As part of our support for implementation of the Stockholm and Rotterdam Conventions, we organised over 100 capacity building workshops and conferences during 2003–2004. Improved governance and an integrated approach to the global chemicals agenda was also advanced through the development of a Strategic Approach to International Chemicals Management (SAICM), a process that we facilitated during the last four years. The development of SAICM was mandated by the UNEP Governing Council and endorsed by WSSD and the New York summit. The process was supported by a steering committee comprising the Intergovernmental Forum on Chemical Safety, FAO, GEF, ILO, UNDP, UNEP, UNIDO, UNITAR, WHO, World Bank and the OECD. A wide range of sectors and stakeholders participated in three international preparatory sessions that UNEP co-convened in Bangkok (2003), Nairobi (2004) and Vienna (2005). SAICM will provide a global policy framework to support the WSSD goal that, by 2020, chemicals are used and produced in ways that minimise significant adverse impacts on human health and the environment. Adopted by the International Conference on Chemicals Management and endorsed by UNEP Governing Council in Dubai in early 2006, SAICM will give new impetus to the efforts

of all stakeholders to achieve the 2020 goal. UNEP will continue to play a key role by providing the SAICM secretariat and managing the SAICM Quick Start Programme trust fund, as well as directly assisting developing countries in their implementation of SAICM.

As is evident from the above, a central consideration in our activities over the last four years has been bringing about greater synergy between different activity areas. Our work in the field of environmentally sound technologies and SCP provides a good example. We have refocused the work of our International Environmental Technology Centre (IETC) in Japan to target activity areas that support our sustainable consumption and production work, including waste management and disaster prevention. This included contributions to the launch of the 3-R (reduce, reuse, recycle) Initiative. It also included a major challenge in meeting a specific regional need, co-ordinating implementation of the Support for Environmental Management of the Iraqi Marshlands project. In the Iraqi project, with a budget of US\$11 million, we have used our related ICT capabilities to introduce the support of needs-based information systems. The Iraqi Marshland Web site and Marshlands Information System, both in English and Arabic, are being supported by our ESTIS, internet software system for sharing and disseminating environmental information.

The above provides a snapshot of activities over the last four years, reporting follow-up to “*What we said in 2002.*” As is the case with the industry Report Cards, it does not cover all activities, but it provides a representative overview of highlights with respect to the undertakings we made.

APPENDICES



Appendix 1: Acronyms

ACCA: Association of Chartered Certified Accountants	HSE: Health, Safety & Environment
ACEA: European Automobile Manufacturers Association	IADB- MIF: Inter-American Development Bank / Multilateral Investment Fund
ACORE: American Council on Renewable Energy	IAI: International Aluminium Institute
A.I.S.E.: International Association for Soaps, Detergents and Maintenance Products	IASB: International Accounting Standards Board
APELL: UNEP's Awareness and Preparedness for Emergencies at a Local Level programme	ICCA: International Council of Chemical Associations
CAST: Caribbean Alliance for Sustainable Tourism	ICC: International Chamber of Commerce
CEFIC: European Chemical Industry Council	ICCL: International Council of Cruise Lines
CEMBUREAU: The European Cement Association	ICO: International Coffee Organization
CESR: Corporate Environmental and Social Responsibility	ICFPA: International Council of Forest and Paper Associations
CFCs: Chlorofluorocarbons	ICFTU: International Confederation of Free Trade Unions
CIAA: Confederation of the Food and Drink industries of the EU	ICMM: International Council on Mining and Metals
CICA: Confederation of International Contractors' Associations	IEA: International Energy Agency
CHA: Caribbean Hotel Association	IFAC: International Federation of Accountants
CSI: WBCSD Cement Sustainability Initiative	IFA: International Fertilizer Industry Association
CSR: Corporate Social Responsibility	IFRIC: International Financial Reporting Interpretations Committee
EACA: European Association of Communication Agencies	IFTO: International Federation of Tour Operators
ECF: European Coffee Federation	IHA: International Hydropower Association
EMAS: Eco-Management and Audit Scheme	IHRA: International Hotel and Restaurant Association
EMS: Environmental Management System	ILO: International Labour Organization
EPA: United States Environmental Protection Agency	IIED: International Institute for Environment and Development
EREC: European Renewable Energy Council	IIR: International Institute of Refrigeration
EU: European Union	IISD: International Institute for Sustainable Development
FAO: Food and Agriculture Organization	IISI: International Iron and Steel Institute
FIDIC: Fédération Internationale des Ingénieurs-Conseils (International Federation of Consulting Engineers)	IMO: International Maritime Organization
FIEC: European Construction Industry Federation	IPCC: Intergovernmental Panel on Climate Change
GEF: Global Environment Facility	IPIECA: International Petroleum Industry Environmental Conservation Association
GeSI: Global e-Sustainability Initiative	IREA: International Renewable Energy Alliance
GHG: Greenhouse Gas	IRU: International Road Transport Union
GRI: Global Reporting Initiative	ISES: International Solar Energy Society
HCFC: High Carbon Ferro Chromium	ISO: International Organization for Standardization
HFC: Hydrofluorocarbon	ISWA: International Solid Waste Association
	ITU: International Telecommunication Union
	IUCN: The World Conservation Union
	IUR: International Union of Railways

- LCA: Life Cycle Analysis
LPG: Liquefied Petroleum Gas
MDGs: Millennium Development Goals
NGO: Non-governmental Organisation
OCTA: Ocean Conservation and Tourism Alliance
OECD: Organisation for Economic Co-operation and Development
OGP: International Association of Oil and Gas Producers
OPEC: Organization of the Petroleum Exporting Countries
OSHA: Occupational Safety and Health Administration
PATA: Pacific Asia Travel Association
PCA: Portland Cement Association
REACH: European Union framework for the Registration, Evaluation and Authorisation of Chemicals
REN21: Renewable Energy Policy Network for the 21st Century
SAICM: Strategic Approach to International Chemicals Management
SCP: Sustainable Consumption and Production
SMEs: Small and Medium-sized Enterprises
TUAC: Trade Union Advisory Committee to the OECD
UIC: Union Internationale des Chemins de fer (International Union of Railways/IRU)
UITP: Union Internationale des Transports Publics (International Association of Public Transport)
UNCSD: United Nations Commission on Sustainable Development
UNCTAD: United Nations Conference on Trade and Development
UNDESA: United Nations Department of Economic and Social Affairs
UNDP: United Nations Development Programme
UNEP: United Nations Environment Programme
UNEP FI: UNEP Finance Initiative
UNFCCC: United Nations Framework Convention on Climate Change
UNHCR: United Nations High Commissioner for Refugees
UNICEF: United Nations Children's Fund
UNIDO: United Nations Industrial Development Organization
UNITAR: United Nations Institute for Training and Research
UNWTO: United Nations World Tourism Organization
UPU: Universal Postal Union
WBCSD: World Business Council for Sustainable Development
WCI: World Coal Institute
WCL: World Congress of Labour
WCRE: World Council for Renewable Energies
WEC: World Energy Council
WFA: World Federation of Advertisers
WHO: World Health Organization
WLPGA: World LP Gas Association
WRI: World Resources Institute
WSSD: World Summit on Sustainable Development
WTO: World Trade Organization
WTTC: World Travel and Tourism Council
WWEA: World Wind Energy Association

Appendix 2: A UNEP Contribution to CSD-14 and CSD-15

This publication is the outcome of a process UNEP facilitated in preparation for the fourteenth and fifteenth sessions of the UN Commission on Sustainable Development (CSD) in 2006 and 2007, in particular its focus on “Industrial Development.” The multi-year work programme of the CSD beyond 2003 is organised on the basis of seven two-year cycles, with each cycle focussing on selected thematic clusters of issues. For the 2006–2007 cycle the selected themes are:

- Energy for Sustainable Development
- Industrial Development
- Air Pollution / Atmosphere
- Climate Change

In CSD deliberations on these issues, reference is also made to the cross-cutting issues of poverty eradication, changing unsustainable patterns of consumption and production, and protecting and managing the natural resource base of economic and social development.

The full set of Report Cards included in this publication is also available online at <http://www.unep.fr/outreach/csd14/index.htm>, where public comment on their content can be provided. Updates on related activities under the process will also be provided via this Web link. Further information can be obtained from Cornis van der Lugt, the project co-ordinator at UNEP DTIE in Paris.

The grouping of the individual sectors in four clusters is done for functional reasons, mindful that some industries overlap and that the categorisation is not absolute.

The following business and industry organisations responded positively to the invitation by UNEP in June 2005 to participate in the Report Card process:

American Council on Renewable Energy (ACORE)
 Caribbean Alliance for Sustainable Tourism (CAST)
 Confederation of International Contractors’
 Associations (CICA)
 Confederation of the Food and Drink industries of
 the EU (CIAA)

e7 (ten electrical utilities from G8 countries)
 European Association of Communication Agencies
 (EACA)
 European Automobile Manufacturers Association
 (ACEA)
 European Business Council for Sustainable Energy
 (e5)
 European Construction Industry Federation (FIEC)
 European Renewable Energy Council (EREC)
 Global e-Sustainability Initiative (GeSI)
 International Aluminium Institute (IAI)
 International Association for Soaps, Detergents and
 Maintenance Products (A.I.S.E.)
 International Association of Oil and Gas Producers
 (OGP)
 International Association of Public Transport (UITP)
 International Coffee Organization (ICO)
 International Confederation of Free Trade Unions
 (ICFTU)
 International Council of Chemical Associations
 (ICCA)
 International Council of Cruise Lines (ICCL)
 International Council of Forest and Paper
 Associations (ICFPA)
 International Council on Mining and Metals (ICMM)
 International Federation of Accountants (IFAC)
 International Federation of Consulting Engineers
 (FIDIC)
 International Federation of Tour Operators (IFTO)
 International Fertilizer Industry Association (IFA)
 International Hotel and Restaurant Association
 (IHRA)
 International Hydropower Association (IHA)
 International Institute of Refrigeration (IIR)
 International Iron and Steel Institute (IISI)
 International Petroleum Industry Environmental
 Conservation Association (IPIECA)
 International Road Transport Union (IRU)
 International Solar Energy Society (ISES)
 International Solid Waste Association (ISWA)
 International Union of Railways (IUR / UIC)
 Pacific Asia Travel Association (PATA)

Portland Cement Association (PCA)
The European Cement Association (CEMBUREAU)
Trade Union Advisory Committee to the OECD
(TUAC)
Universal Postal Union (UPU)
UNEP Finance Initiative (UNEP FI)
World Coal Institute (WCI)
World Federation of Advertisers (WFA)
World LP Gas Association
World Travel and Tourism Council (WTTC)
World Wind Energy Association (WWEA)

The following business and industry organisations responded but declined to participate in the 2005–2006 process:

Air Transport Action Group (ATAG)
International Council of Tanners (ICT)
International Textiles Manufacturers Federation
(ITMF)
Soap and Detergent Association (SDA – U.S.)
International Water Association (IWA)

About the UNEP Division of Technology, Industry and Economics

The UNEP Division of Technology, Industry and Economics (DTIE) helps governments, local authorities and decision-makers in business and industry to develop and implement policies and practices focusing on sustainable development.

The Division works to promote:

- > sustainable consumption and production,
- > the efficient use of renewable energy,
- > adequate management of chemicals,
- > the integration of environmental costs in development policies.

The Office of the Director, located in Paris, coordinates activities through:

- > **The International Environmental Technology Centre** - IETC (Osaka, Shiga), which implements integrated waste, water and disaster management programmes, focusing in particular on Asia.
- > **Production and Consumption** (Paris), which promotes sustainable consumption and production patterns as a contribution to human development through global markets.
- > **Chemicals** (Geneva), which catalyzes global actions to bring about the sound management of chemicals and the improvement of chemical safety worldwide.
- > **Energy** (Paris), which fosters energy and transport policies for sustainable development and encourages investment in renewable energy and energy efficiency.
- > **OzonAction** (Paris), which supports the phase-out of ozone depleting substances in developing countries and countries with economies in transition to ensure implementation of the Montreal Protocol.
- > **Economics and Trade** (Geneva), which helps countries to integrate environmental considerations into economic and trade policies, and works with the finance sector to incorporate sustainable development policies.

UNEP DTIE activities focus on raising awareness, improving the transfer of knowledge and information, fostering technological cooperation and partnerships, and implementing international conventions and agreements.

For more information,
see www.unep.fr

What progress has been made by business and industry towards sustainable development since the World Summit on Sustainable Development (WSSD) of 2002? What challenges are business and industry facing as they take action towards environmental and social responsibility? What new partnerships are they developing with non-governmental and public sector organisations to collectively address environmental concerns?

Class of 2006 provides an update. It describes the efforts from 30 industry groups to realise, measure, and report progress in addressing global environmental protection and social responsibility challenges. With new contributions from cement, coffee, detergents, mining, paper, postal services, public transport, and renewables, Class of 2006 provides an even broader overview of business policies and action for sustainable development than the previous reports of 2002. Class of 2006 is a key contribution to discussions at the UN Commission on Sustainable Development on the theme "Industrial Development".

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