

Corporate Environmental Reporting in the Airline Sector: A Route to Stakeholder Empowerment?

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Abstract

Over the last decade, corporate environmental reporting has matured from the early 'green glossies' to publications that provide a range of quantitative and qualitative information about an ever-widening array of environmental and social responsibilities. In particular, the use of performance indicators to measure social and environmental performance has been seen as a significant improvement in reporting practice. Apart from displaying to stakeholders that the organisation is taking seriously its environmental and social responsibilities, indicators are a central part of effective environmental management as they allow the tracking of improvements and thus assist in setting future priorities.

However, the value of EPIs to external audiences is less clear. Increasingly key stakeholders are demanding more comparable information that will allow the benchmarking of companies on the basis of their environmental and social performance. Some commentators believe that this could even lead to full cost accounting in which the economic, environmental and social performance of companies are compared on one balance sheet. But how close are we to this vision of wider corporate accountability?

This poster presents the findings of an investigation of environmental reporting practice in the airline sector. In recent years, given the exceptional growth in the sector, the aviation industry has been increasingly criticised for its environmental and social impacts. Concerns have been raised that these fears are already beginning to constrain future development options. This in turn has stimulated a more proactive approach to environmental and social responsibilities among key actors in the sector, which is reflected in an increase in social and environmental reporting and a willingness to engage with stakeholders in defining corporate development opportunities. As such the sector provides a useful arena in which to assess the extent of stakeholder empowerment to be derived from a genuine comparison of relative environmental and social performance.

The findings demonstrate that, despite an increase in the availability of quantitative data and some consistency in the use of key performance indicators (KPIs), comparing social and environmental performance across the airline sector is fraught with difficulties. Variations in the exact definitions of the indicators used and the suite of functions embraced by the term 'airline' are identified as fundamental obstacles to effective sector benchmarking. Furthermore, the experience gained from engaging with stakeholders also suggests that the output indicator approach to environmental performance measurement fails to address a key element in impact evaluation. Namely, the fact that stakeholder concerns are profoundly influenced by the spatial context of the impact. Thus, the aggregate picture of environmental and social performance provided by company-wide KPIs may not accurately reflect stakeholder concerns and thus the real social and environmental constraints faced by airlines. Overall, these complicating factors look set to confuse attempts by the lead-edge airlines to identify and legitimise indicators of social and environmental performance and, thereby, limit the degree of stakeholder empowerment resulting from social and environmental reporting.

Introduction: A Brief History of Corporate Environmental Reporting

Over the course of the 1990's corporate environmental reports (CERs) evolved at a tremendous rate as they became more sophisticated at disclosing a wider range of activities and impacts (good and bad), at least at the lead edge. From the days of a one-page declaration in the back of a company's annual report, environmental issues have become a major part of corporate life. During the 1990s a number of trends in CERs were observed, such as the (Lober et al, 1997):

- Organisation of information in reports following guidelines set out by independent bodies.
- Quantification of all environmental discharges, both globally and at the level of individual sites.
- The calculation and presentation of quantifiable goals against which progress can be measured: these can be used as achievement markers from year to year.
- Third party verification of the environmental performance of the organisation.
- Internet and other electronic based presentations of the report.
- Establishing and explaining the links between the report and the EMS of the organisation.
- Distinct reference to sustainability, the companies perception of what this means and how it is going to be achieved.
- A quantified cost-benefit analysis of the entire environmental programme, showing annual and overall savings and expenses.
- Mass balance, or life cycle reports being integrated into the environmental reports, using a broader range of information on resource usage.

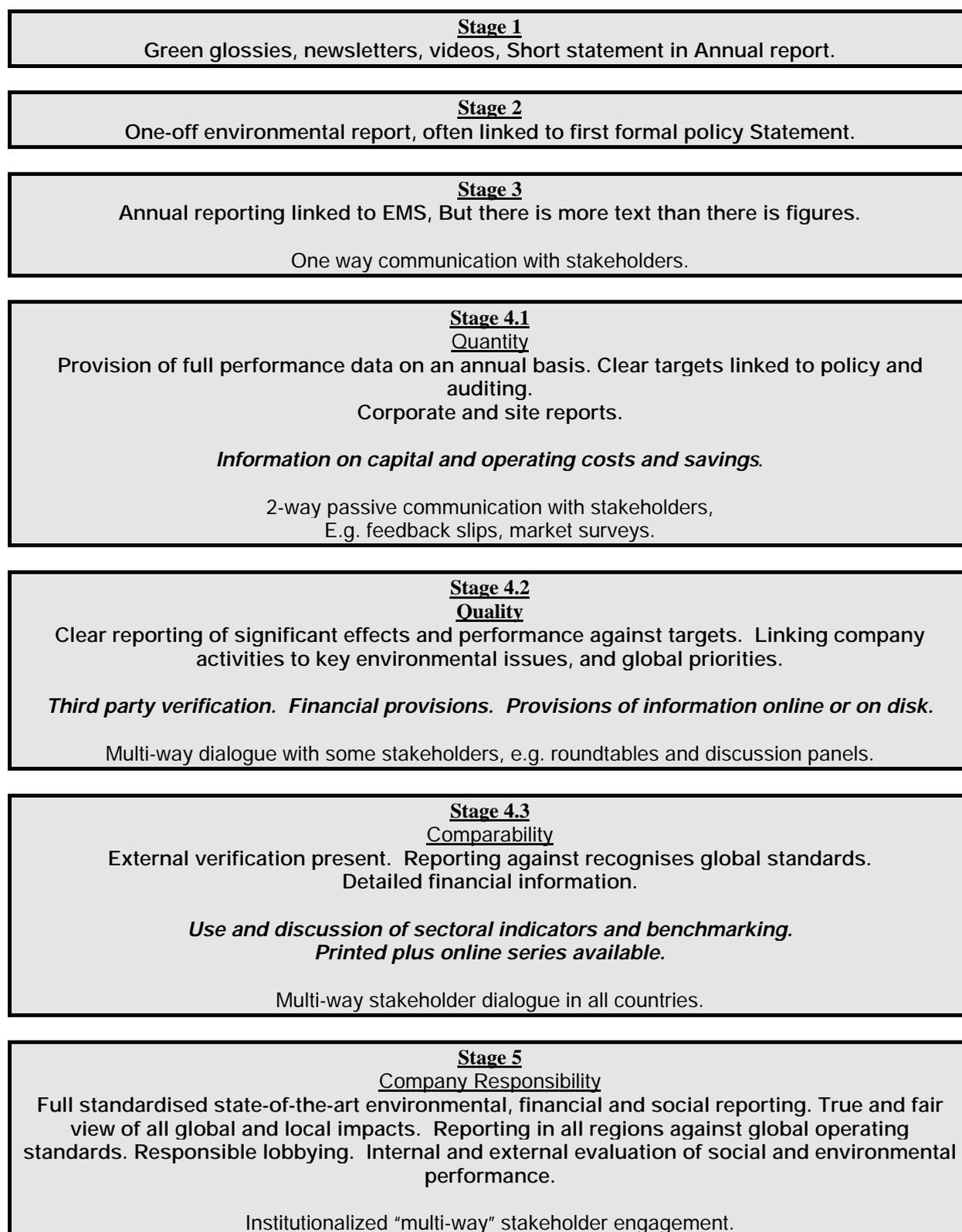
Overall, the development of corporate environmental reporting styles has seen an increase in the breadth and depth of the issues covered. This is clearly evident when examining the evolution of reporting award schemes. For example, UNEP/SustainAbility found it necessary to revise their 5 Stage Model of Reporting Practice to accommodate the advances in reporting standards that took place between their 1994 and 1997 reviews (Elkington et al, 1998). As shown in Figure 1, this revised model incorporates three sub-divisions of Stage 4, to enable more accurate classification of the majority of the reports reviewed that were grouped in this category, which is characterised by a systematic approach to quantitative data presentation.

The most recent review of reporting practice undertaken by UNEP/SustainAbility focused on the best reporters in the world, and reinforced this picture of increasingly sophisticated reporting of a wider range of environmental, and increasingly social, issues when identifying the following trends in the evolution of reporting best practice (UNEP/SustainAbility, 2000):

- Clear evidence of top management support for environmental improvement and more specifically the 'triple bottom line' agenda.
- An emphasis on the business case for sustainable development, in which the scale of investment in environmental reporting is recognized and justified along with the potential commercial returns from environmental improvement.
- Increasing standardization of reporting practice as reporting standards and guidelines are more widely adopted.
- The dominance of companies from OECD countries among the lead reporters, resulting in only rare references to the developing world sustainability agenda.
- Increasing use of key performance indicators that provide the quantitative support for: continuous improvement efforts, the development of broader policy commitments, and attempts to strengthen public accountability.
- A recognition of the importance of validation to the reporting process. External verification, wider evidence of quality assurance (e.g. accreditation to ISO14001) and 'perspective' from leaders in the sustainability field have all been used.
- A willingness to be more open and accountable in engaging in the public policy debate surrounding the delivery of sustainable development.
- An increasing role for electronic communications (e.g. the Internet, intranets and extranets) in providing information tailored to the needs of specific stakeholder groups.

Overall, the picture that emerges is one of a more comprehensive commitment to improvements in environmental and social performance. But why this commitment and considerable financial expenditure on the reporting of environmental and social issues?

Figure 1- UNEP/Sustainability Revised (1997) Five-Stage Model



N.B. *Italics* are non-essential criteria to achieve this stage of reporting

Motivations for Environmental Reporting

The reasons for environmental reporting are rarely explicitly explained in the reports themselves. However, key returns on the investment of time and resources into this process have been summarised by Kolk (2000) as:

- Enhanced ability to track progress against specific targets
- Facilitating the implementation of the environmental strategy
- Greater awareness of broad environmental issues throughout the organisation
- Improved ability to clearly communicate the corporate message internally and externally
- Improved all round credibility from greater transparency
- An ability to communicate efforts and standards
- Providing a licence to operate and campaign
- Reputational benefits, cost savings identification, increased efficiency, enhanced business development opportunities and enhanced staff moral.

This list suggests that as companies have moved to the production of more quantified and verifiable reports, they have derived both internal and external benefits.

Internally, the data has enabled a more comprehensive tracking of environmental performance, which has implications for agenda setting, staff motivation, better liability management, improved exploitation of opportunities presented by environmental and social challenges, and so on. Externally, it is clear that companies see reporting as a means of maximising the reputational benefits associated with their environmental and social initiatives. Indeed, the Herremans et al (1999) imply that the 'social contract' that firms need to survive is determined by environmental and social performance in addition to the traditional economic indicators. Thus, society will allow a firm to survive and grow 'as long as the firm operates in a manner that is seen as legitimate by society; that is, in a sustainable manner' (p.159-160). In this context CERs provide a means of endorsing business activity.

To date the information released to achieve this 'licence to operate' has been controlled by the reporting companies. Thus, although a degree of standardisation in the form of reporting and the presentation of quantitative indicators of performance has been achieved, CERs fall some way short of providing a genuine opportunity to compare the relative environmental and social performance of companies. Significantly, this lack of a capacity for inter-firm comparison is exacerbated by a lack of willingness on the part of senior executives to engage in any form of benchmarking. As *The Global Reporters* demonstrated 'no CEO has yet benchmarked the results of his or her company against competitors – and only a very few to industrial averages' (UNEP/Sustainability, 2000: 37).

This is not to suggest that the information in CERs is of no value to stakeholders as the dialogue that can be stimulated through their publication can provide learning opportunities for the company and its stakeholders alike (Herremans et al, 1999). This in turn can inform company development and improve the credibility of the organisation in the eyes of key stakeholders. However, one can question whether this level of voluntary disclosure of information is sufficient to optimise the improvements in welfare that could result from the stimulus for behavioural change created by comprehensive benchmarking.

Performance Benchmarking: Barriers and Demands

Several factors that make corporate environmental information difficult to use for external evaluation and decision-making have been identified. These are that (Synnestvedt, 2001: 166-7):

- 'The information is spread in different sources;
- Not all relevant information exists;
- The language is often technical;
- There are measure problems;
- There are statistical lags;
- The available information can often be hard to verify; and
- The available information does not exist in a form that makes it suited for comparison between firms.'

Reasons given for the diversity of information provided by companies include attempts to minimise the costs of data collection, differing private reasons for publishing information and a lack of standards within industry relating to what information to disclose and how it should be presented. In the light of these motivations some commentators have called for the imposition of disclosure standards and auditing procedures to ensure that the private disclosure of environmental information is raised to the social optimum (Synnestvedt, 2001 and Schaltegger, 1997). Others suggest that the increasing influence of key stakeholder groups with growing interests in the environmental and social performance of companies may drive a market-led process of standardisation in the provision of information. For example, Friedman and Miles (2001: 531) suggest that in the UK context 'the financial community, in particular the socially responsible investment (SRI) sector, will increasingly influence those producing corporate social and environmental reports in the foreseeable future'. This prediction is based on the premise that:

- The influence of the SRI sector will increase as more funds are promoted on a socially responsible basis and the sector becomes more successful in engaging with corporations.
- The wider financial community will attach greater importance to the risks associated with corporate neglect of social and environmental issues in their business valuations as a direct result of government policy changes (e.g. The Turnbull Report on corporate governance which made risk management, including environmental and reputational risk a requirement of stock market listing and the entrance of institutional funds into the SRI market following the Pensions Review which made disclosure of SRI policy mandatory).

Overall, therefore, be it through market-forces or direct regulation, the pressure for inter-firm comparison of environmental and social performance seems to be gaining momentum. This raises an important question: what is the gap between the current provision of information in CERs (and indeed the broader sustainability and social reports produced by some companies) and that required for effective performance benchmarking? In order to address this issue, the paper now turns to a study of reporting practice in the airline sector.

Airline Corporate Environmental Reporting

Aviation is one of the world's fastest growing industries with demand doubling over the last seven to eight years and predicted to double again in the next ten to twelve years (IATA, 2000). Unfortunately, as a sector with major infrastructure requirements and fundamentally reliant on fossil fuel, this growth has resulted in significant environmental impacts.

Given the sector's contribution to growth and environmental impact, it is hardly surprising that aviation industries have been to the forefront of the sustainability debate. This may explain why key actors in the sector have sought to take a proactive stance by publishing corporate environmental/social/sustainability reports. In fact, the British Airports Authority (responsible for Heathrow Airport) and British Airways were ranked as, respectively; equal first and 18th in *The Global Reporters* survey of the World's top 50 reporters (UNEP/SustainAbility, 2000).

Our study of airline corporate environmental reporting, commissioned by the International Air Transport Association (IATA), reflects the general picture of increases in the quantity and quality of environmental reporting over the last decade, as outlined in the previous section. For example, in 1990 only British Airways and Swissair had produced CERs, whereas by the mid-1990s seven airlines had produced environmental reports of some description. By mid-2001 this number had risen to 17 of which at least 10 companies have embarked upon a continuous programme of regular (if not annual) reporting (see Table 1).

This total of 17 reporters out of 272 IATA members is a very small proportion, but not dissimilar from levels experienced in other industries that are dominated by smaller companies. It is also evident that (in common with a number of other industries) the practice of environmental reporting is most widespread in the European Region (11 airlines) with only three airlines reporting from North America and three from the Asia Pacific region. The relatively high frequency of reporting in Europe has also been highlighted in a recent study of the Fortune Global 250 companies, which also demonstrated the below average rate of reporting among US companies (Kolk et al, 2001).

Table 1 : CER publication by airline and year.

| Airline | Years | Size of Airline |
|-------------------------|--|-----------------|
| Air France | 1996/97, 1997/98, 1998/99, 1999/2000 | |
| Alitalia | 1999 | |
| American Airlines (AMR) | 1994/95 | |
| ANA | 1998/99 | |
| British Airways | 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000 | |
| Cathay Pacific | 1996, 1998/9 | |
| Delta | 1999, 2000 | |
| Falcon Air | 2000 | |
| Finnair | 1998, 2000 | |
| Iberia | 1995, 1996, 1997, 1998, 1999, 2000 | |
| JAL | 1994, 1998/99 | |
| KLM | 1996/97, 1997/98, 1998/99, 1999/2000 | |
| Lufthansa | 1994, 1995/96, 1996/97, 1997/98, 1998/99, 1999/2000 | |
| Luxair | Unknown | |
| SAS | 1995, 1996, 1997, 1998, 1999 | |
| Swissair | 1989, 1992, 1995, 1998/99 | |
| United Airlines | 1996/97 | |

Source: Dobbie and Hooper, 2000.

Table 1 also indicates that the production of CERs is almost exclusively restricted to the world's largest airline operators, the exceptions being Luxair and Falcon Air. Data indicate that approximately one third of large airlines now regularly publish CER's. This again compares with the Kolk et al study (2001), which indicated that just over one third of the Fortune 250 companies produce an environmental report.

With regard to the content of the CERs the fact that they have never been subject to legislative requirements means there is considerable variety, ranging from those containing extensive statistical summaries of the airline's impacts and performance to those that simply list good works or actions taken to protect the environment. A number of 'new' issues have started to feature in recent reports, particularly in Europe such as the social and economic benefits of air travel, sustainability, eco-efficiency, global climate change and sustainable tourism.

The appearance of the CERs shows a contrast between those containing high quality photography and the use of colour, to those that appear with only black and white text, as purely technical reports. This reflects both the nature of the intended audience, cultural differences in the production of such material, and also concern by some that the document is not seen primarily as a PR tool.

Overall, therefore the expansion in reporting activity is not confined to the number of reporters but also reflected in the content of the reports themselves. Even the most cursory glance at the time series of reports produced by the leading airlines over the last decade provides evidence of a widening environmental agenda both in the breadth and depth of coverage, as well as the extent to which the documents conformed to good practice criteria. More specifically, the review of airline reporting for IATA revealed a number of key developments symptomatic of a convergence of reporting practice, in particular these include (Dobbie and Hooper, 2001):

- The introduction of the concept of **sustainability** in some reports. Most explicitly BA addresses this in the 'Social and Environmental Report 2000', which dedicates a separate section to social indicators of corporate performance. Other airlines beginning to acknowledge the importance of the 'triple bottom line' of environmental, social and economic returns in their report structures and content include Air France, Cathay Pacific, Delta, KLM, Lufthansa and SAS. Although the degree to which the issues are addressed systematically varies.

- Increased application of **generic guidelines** for reporting environmental, social and economic performance within CERs. For example, BA was a pilot company in the development of the GRI Sustainability Reporting Guidelines (GRI, 2000) and state that in preparing their 2000 Report they adhered to these principles. KLM also indicate that they used GRI reporting principles to inform the production of their CER.
- A range of evidence produced by airlines to demonstrate the **validity of the data** contained in their CERs. This includes: wider recognition of the quality of their reporting in the form of awards (eg. BA were shortlisted for the ACCA Environmental Awards in 1998, ranked in the top 10 of the FTSE 100 companies in the 1999 Business in the Community Survey and selected for inclusion in the Dow Jones Sustainability Index; and KLM finished second in the Dutch Environmental Accountancy Association Awards in 1998/9); the presence of verification statements (e.g. the CERs of BA, KLM and SAS were all subject to external verification) and accreditation to formal environmental management systems (e.g. Lufthansa has EMAS certified areas of its business and Falcon Air, KLM and Cathay Pacific all indicate that areas of their operations have ISO 14001 accreditation).
- The importance of **wider stakeholder dialogue** to inform the development of responses to the challenge of sustainability is evident in a number of airline CERs. Examples range from the 'charters' with airports developed by Air France to deal with noise issues, to the inclusion of articles from stakeholders in the CER (Lufthansa), to a cataloguing of consultation and reporting initiatives (BA). These initiatives combined with more extensive use to the Internet to provide supplementary and supporting data tailored to specific interest groups look set to influence the reporting activities of the leading edge airlines.

These emerging trends demonstrate some convergence in reporting best practice within the sector. However, in only a small number of reports have attempts been made to identify summary or key performance indicators (KPIs). These provide information on a restricted number of absolute and productivity based measures of environmental performance. For example BA has introduced 'headline' indicators to draw attention to overall performance in within environmental, social and economic areas of the business. A similar approach is evident in the Air France report where productivity and absolute indicators are used to highlight key areas of environmental performance. These more generic indicators could potentially offer a base from which to build towards sector wide standardised indicators and, thus, a stepping-stone towards the development of performance benchmarks.

In order to understand how close the sector is to realising this potential for benchmarking a further study has been conducted to review the use of environmental performance indicators (EPIs) across the sector, identify commonly used indicators and evaluate their comparative qualities.

The Use of Environmental Performance Indicators in the Airline Sector

The most recent CERs produced by the airlines identified in Table 1 were used as the source of information on the use of EPIs. This revealed that within the primary operational areas identified by Dobbie and Hooper – namely flight, cabin and ground operations – in excess of 120 EPIs were used by the airlines to record resource use and consequent waste streams. These EPIs included examples of the types of indicator categorised by the International Standards Organisation in ISO14031 (ISO, 2000), namely:

- Absolute indicators – data representing total quantities of resource use and waste emissions, e.g. fuel use expressed in tonnes.
- Relative indicators – where resource use/emission are related to some measure of business service provision (also known as ratio indicators), e.g. litres of fuel per revenue tonne kilometre.
- Indexed indicators – these link the data to a chosen standard or baseline, e.g. per cent change in carbon dioxide against performance in a base year.
- Aggregated indicators – combine data of the same type from different sources, e.g. carbon dioxide emissions from all transport activities.
- Weighted indicators – attempt to sum different output indicators through the use of conversion factors e.g. SAS's use of a universal environmental impact index.

Unfortunately, the wide range of indicator use does not imply a huge degree of overlap in their use. Of the 120 plus EPIs identified only 12 were utilised by 4 or more airlines. As might be expected the highest degree of commonality in use was found in the area of flight operations, where 7 of the 46 EPIs were used by core groups of airlines ranging in size from 4 to 8.

When the relative performance of the airlines within the EPI categories was ranked a degree of consistency in the absolute indicators associated with flight operations was observed. This is hardly surprising given the over-riding influence of the scale of activities on the absolute EPIs. However, much less consistency was demonstrated in the ranking of corporate performance in absolute EPI categories linked to ground operations. When the performance in relative EPI categories (in which the influence of scale has been factored out) was compared no consistency in the ranking of companies was observed, even where EPIs were linked to the same operational activity (e.g. fuel used expressed in g/RTK or g/RPK and NO_x emissions in g/RTK). These inconsistencies suggest that, in addition to any genuine differences in the environmental performance of the airlines concerned, other factors may be affecting the performance recorded against specific EPIs. In particular, the investigation identified that variations in the following qualities could affect performance in EPI categories:

- **Nature of the reporting entity** – clear differences in what constitutes ‘an airline’ were evident among the group of reporters. For example, the inclusion of subsidiary companies in the aggregate total provided in corporate EPIs can influence the overall mix of activities contributing to the recorded performance. In Lufthansa’ case the inclusion of Sky Chefs in their ground-based operations influences the overall character of the airline and may well explain why little consistency in the absolute EPIs derived from ground operations was observed.
- **Definitions of service provision** – a number of different service provision indicators (SPIs) were used by airlines to represent the scale of their commercial activities. These ranged from gross revenue and passenger numbers to more sophisticated measures such as available passenger kilometres (APK) and revenue passenger kilometres (RPK). The distinction between available capacity and actual service delivery (as measured by RPK) is an important one as the former represents the potential environmental efficiency of the system whilst the latter indicates the impacts associated with actual passenger movements. Significantly the ranking of the SRIs revealed a consistent picture of the scale of airline activities despite variation in the uptake of service provision from 50 to 75%. In other words, the impact of differences in uptake on the achieved SPIs (e.g. RPK and RTK) was insufficient to affect the ranking of companies by SPI. Nevertheless, the type of SPI and its specific definition (considerable variation in the interpretation of the same SPIs was revealed) will have implications for relative EPIs where performance is expressed as a ratio of the chosen SPI.
- **Definitions of EPIs** – above and beyond any inconsistencies resulting from different interpretations of SPIs, considerable variation in the specific definitions of EPIs was also demonstrated. For example, in relation to flight-based EPIs some airlines use total emissions (e.g. BA Finnair and SAS), whereas other confined the data to high altitude cruising (i.e. exclude the landing and take-off cycle) (e.g. Air France, KLM and Swissair). Furthermore, emissions and fuel use appear to be based on calculated distances (based on Great Circle Distance) in some cases and actual distances flown in others.
- **Reporting Time Frames** – the different reporting timescales adopted by airlines and indeed the availability of the most recent CER have an important influence over the age of any data used in benchmarking. For example, when BA compared their fuel efficiency figures with leading competitors (BA, 2000) the base year from which the information was provided varied from 1997 to 1999/2000.

Overall, this research has demonstrated considerable variation in a number of factors that can affect performance in given EPI categories. Consequently, in their present form the EPIs produced in the CERs of airlines do not provide a means of genuinely comparing the relative environmental (or social) performance of airlines. Thus, the capacity for benchmarking is presently at best limited and arguably absent altogether.

Improving the Capacity for Benchmarking

Many of the inconsistencies outlined above appear relatively straightforward to address, at least from a technical perspective. This would take coordinated action at an industrial level to develop consistent interpretations of agreed key performance indicators (KPIs) – as the primary sector body, IATA could play a crucial role in this activity. However, comparison on the basis of performance in these KPIs is fraught with problems, which look set to entrench political resistance to the process of benchmarking. For example, one can sympathise with airlines in developing countries that do not have the resources to invest in the new technology that has allowed the larger airlines to make significant improvements in environmental efficiencies in recent years. In addition, the character of the services provided by airlines can differ on the basis of their location and historical development (i.e. predominantly long-haul or short-haul businesses). One answer to these problems is to allow for more sophisticated benchmarking using a ranging of performance qualities. For example, comparison of absolute performance could be complemented with relative EPIs and indicators of the rate of improvements being achieved by individual airlines (e.g. per cent change on performance in a base year) and/or different categories of airline could be defined to enable a like-with-like comparison (e.g. multi-national long-haul carriers).

So some progress could be made in enabling more accurate performance benchmarking on the basis of material and energy inputs and outputs resulting from corporate activity. However, is this what stakeholders really want? If we look at the SRI sector then corporate-wide indicators of environmental efficiencies could address some of the challenges it poses to organisations. However, as the underlying concern is one of reputational risk management, then information on the actual risks as represented by environmental and social *impacts* is required.

Experience from the wider aviation sector suggests that in terms of satisfying aviation stakeholders' multiple and varied interests, a rethink of the indicator framework might be beneficial because of the problematic nature of reaching consensus on what should constitute the sector's EPI's. Furthermore, it engenders a much wider debate that engages with the different priorities of each stakeholder group as well as highlighting the nature of the information each group is seeking. Whilst output indicators have a role to play in satisfying the needs of each stakeholder group, a reinterpretation of the information each stakeholder group is seeking might be more beneficial in the long run (Glicken, 2000). The issue of risk makes an interesting case in point. Even if consensus can be reached amongst stakeholder groups on what constitutes acceptable risk indicators, environmental risk is linked to *impacts*, not *outputs*. It leads one to think about the credibility of output indicators where *impact* is more salient to stakeholders than *output*. What one stakeholder group perceives as a legitimate indicator might not attain the same level of legitimacy amongst other stakeholder groups. Moreover, the place-specific context cannot be ignored and can influence stakeholder goals. Local legal requirements, agreements and political contexts will vary from place-to-place. Whilst emissions are seen as an emerging environmental issue by UK airlines, the same issue receives much greater attention in Switzerland and Sweden due to local legal requirements and the ever-present threat of penalties against airlines that do not meet required emissions standards (Upham, 2001).

Conclusions

The research reported here has demonstrated that the information provided in CERs falls some way short of allowing a genuine comparison of the environmental and social performance of airlines. Consequently, the extent to which CERs empower stakeholders to make informed decisions about companies in respect of the sustainability of their behaviour is severely limited. Given the increase in market-led and policy-led pressure of more transparent accounting of environmental and social performance, it appears that the obstacles to standardised reporting of KPIs may be eroding. However, our findings suggest that even if these technical obstacles are surmounted, then accurate benchmarking may still be difficult given inconsistencies in the character of the corporate entities being assessed. Furthermore, in the light of the context-specific nature of environmental and social impacts and the corresponding risks posed by these affects a reliance on output indicators aggregated at the corporate level may be inappropriate to the needs of specific stakeholder groups. Wider dialogue with the latter groups is advocated as a means of revealing the true nature of the information required to empower stakeholders.

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