

Environmental reporting and communication – “Show me the evidence”!

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BIOGRAPHY

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He is a co-author of several papers presented at international conferences, including: ‘ESPO / EcoPorts Port Environmental Review 2009 - Charting the way ahead’ presented at the 5th International Ports and the Environment Conference (Stockholm, 2010); ‘Environmental Performance Indicators for port operations: management, monitoring and reporting’ presented at the British Ports Association (BPA) Conference 2010 (Torquay, 2010); ‘EcoPorts entering a new era: re-launched as part of the ESPO services’ at the Energy for Green Ports and GreenPort Logistics Conference (Venice, 2011); and ‘The PPRISM Project – performance measurement of the European port system’ presented at Managing Environmental Performance for Ports & Terminals (London, 2012).

PAPER

Introduction

Environmental communication implies both internal and external communication. Internal communication contributes to keep port employees updated with the progress being made towards the environment and to raise environmental awareness among them. External communication helps to ensure that port stakeholders and the general public are kept informed of the authority’s environmental progress. Environmental reporting is considered to be the most effective way of environmental communication in ports.

The existence of an environmental communication and reporting procedure is indispensable to inform port stakeholders about the environmental activities, achievements and results that the Port Authority has carried out.

This provision of appropriate environmental data and information may serve to motivate employees, facilitate greater public understanding of the port's efforts to improve its overall environmental performance, and to improve confidence and trust with port stakeholders.

In recent years, the use of sustainability reporting among ports has grown significantly. The European port sector has monitored, since 1996, selected components of environmental management, through the consecutive European Sea Ports Organisation (ESPO) - EcoPorts Environmental Reviews. The table below illustrates the progress achieved by European sea ports on selected indicators over time. Highlighted in red there is the percentage of ports that publish an annual sustainability report.

Environmental Management Component	1996	2004	2009	2013	% change 2004 - 2013
Environmental Policy	45	58	72	86	+28
Policy available to public	-	59	62	82	+23
Policy aimed at compliance+	32	49	58	68	+19
Publishes Environmental Report	-	31	43	64	+33
Designated Environmental personnel	55	67	69	94	+27
Recognised EMS	-	21	48	64	+43
Environmental monitoring programme	53	65	77	79	+14
Performance indicators identified	-	48	60	64	+16

*Figure 1: Trends over time of selected components of environmental management.
Source: ESPO, 2013.*

The table clearly demonstrates evidence of the progress achieved by the port sector during the last 17 years. According to the results of this review in 2013, 64% of the ports publish an annual Environmental report or review (ESPO, 2013). In fact, the publication of an Environmental Report has the second highest growth from 2004 to 2013 (+33%), after the existence of an Environmental Management System (+43%). The trends demonstrate that a lot has been achieved through voluntary self-regulation within the sector.

The presence of an Environmental Report, whether uploaded on a website and/or as a hard copy, is generally indicative of demonstrable competence and activity in the area of environmental management. It also demonstrates action to range of stakeholders and it is recommended by ESPO Code of Practice.

In fact, ESPO has continuously promoted the environmental reporting among the EU port sector. It was initially mentioned in the ESPO Code of Practice (ESPO, 2003) as one of the 'Ten Commandments', and it was reaffirmed in the recently published ESPO Green Guide (ESPO, 2012) as a way to 'be transparent in communicating and reporting on the ports' efforts and environmental performance'.

This paper describes the importance of the environmental communication, and in particular environmental reporting, as a key component for the well-functioning of an Environmental Management System (EMS). Aspects related with the environmental reporting are presented in this paper, such as its benefits or its contents, among others. In addition, the paper also stresses the importance of using Environmental Performance Indicators (EPis) as a tool to provide a clear and meaningful picture of the Port Authority's environmental performance. Finally, the Global Reporting Initiative (GRI) is explained as an example of reporting format and some examples of European ports' reports are given.

2. The role of environmental communication within an EMS

An effective environmental communication and reporting procedure is a key element to ensure the success of any Environmental Management System (EMS) of a Port Authority. An Environmental Management System is a set of management processes and procedures that allow an organisation to analyse, control, and reduce the environmental impact of its activities, products and services and operate with greater efficiency and control (Roberts i Robinson, 1998).

It is a requirement of any Environmental Management System to define and maintain procedures for communication and reporting, with regards to the environmental aspects and impacts of the port. Table 1 presents the requirements needed to establish an , following ISO 14001 (ISO, 2004), EMAS (European Commission, 2009) and PERS (ESPO, 2011) structure, and, as it can be noted, all three standards contain, at least, one communication section, highlighted in bold.

Table 1: ISO 14001, EMAS and PERS structure

	ISO 14001 Clause	EMAS Steps	PERS requirement
PLAN	Not applicable	Not applicable	1.0 Port Profile
	4.2 Environmental Policy	1. Environmental Policy	1.1 Policy statement
	4.3.1 Environmental aspects	2. Initial environmental review	1.2 Environmental aspects and legal requirements
	4.3.2 Legal and other requirements	3. Legal and other requirements	
	4.3.3 Objectives and targets	4. Objectives and targets	1.1 Policy statement
	4.3.4 Environmental Management Programme	5. Environmental management programme	1.4 Conformity review
DO	4.4.1 Structure and responsibility	6. Structure and responsibility	1.3 Responsibilities and resources
	4.4.2 Training, awareness and competence	7. Training, awareness and competence	1.1 Policy statement
	4.4.3 Communication	8. Communication	1.5 Environmental Report
	4.4.4 EMS documentation	9. EMS documentation	1.2 Environmental aspects and legal requirement
	4.4.5 Document control	10. Document control	
	4.4.6 Operational control	11. Operational control	1.4 Conformity review
	4.4.7 Emergency preparedness and response	12. Emergency preparedness and response	1.2 Environmental aspects and legal requirement
4.5.1 Monitoring and measurement	13. Monitoring and measurement		
CHECK	4.5.2 Non-conformance and corrective and preventive action	14. Non-conformance and corrective and preventive action	1.4 Conformity review
	4.5.3 Records	15. Records management	Not applicable
	4.5.4 EMS Audit	16. Internal audit 19. Independent validation	1.1 Policy statement
	4.6 Management Review	17. Management review	1.4 Conformity review
ACT	Not applicable	18. Environmental reporting with verified information	Not applicable
	Not applicable	Not applicable	1.6 Best practices

3. Benefits of an Environmental Report

Although producing an Environmental Report implies investing time, effort and budget, it is widely acknowledged that reporting the environmental performance of a company is an excellent opportunity not only to improve its reputation by demonstrating transparency of actions, responsibility and compliance with legislation, but also to identify the Port Authority's environmental impacts, to set up objectives and targets, to identify ways to reduce costs and risks and to discover opportunities for improvement (Puig, 2012). Some of the advantages of producing an Environmental Report, commonly cited by reporters, are summarised in the following list:

- **Risk reduction and cost savings**

In the reporting process, it is common to identify areas of environmental risk that previously were not noticed. Improved environmental performance will often have a direct and measurable impact on profitability through costs saved or through new revenues generated (ACCA, 2001).

- **Compliance with legislation**

By law, large and medium companies must produce an annual business review, which must incorporate a summary of the company's incomes and expenses (Northern Ireland Business Info, 2013). This annual review is expected also to include environmental matters, including the port's impact on the environment. Although small companies are not obliged to report their social, economic and environmental performance, it is highly recommended for them to do so, since they may be considered in a better position by funders, investors and insurers. In addition, by adopting high environmental standards, a port is better prepared for current and future environmental regulation.

- **Strengthens stakeholders' relations**

It may be considered that making an Environmental Report public helps a port authority to facilitate communication and build trust with a wide variety of stakeholders, such as current and prospective employees; port tenants and operators; customers; shareholders and funders, including bankers, investors and insurers; government, including regulators, local and planning authorities. It also allows the port to demonstrate improvements in the environmental performance to pressure groups, including academics, NGOs, the media, and the local community and neighbours. Identifying the key stakeholders of the port is helpful to know where to focus the efforts (Puig, 2012).

- **Continual improvement**

The public disclosure of the port's targets and objectives may act as an internal driver, continually improving the port performance (ACCA, 2001).

- **Marketing advantage**

Customers are increasingly interested in the environmental and social impact of businesses. Producing an Environmental Report can bring a marketing advantage by demonstrating the port's awareness of its environmental responsibilities (Northern Ireland Business Info, 2013).

- **Public recognition**

A port will gain external public recognition as a responsible organisation if it produces a complete and credible Environmental Report (ACCA, 2001).

● Port workers recruitment and retention

Job applicants increasingly look at the environmental performance of a business before applying for a position. Having a well-prepared Environmental Report may be useful to attract the attention of potential job applicants. In addition, a port that has a more open and transparent style of business will motivate and enhance the morale of the current port workers.

4. Types of environmental reporting

As far as the methods to report are concerned, there are three common ways to report. The first option is to publish a stand-alone environmental hard-copy report. The main advantages are that it may be more easily disseminated to a target audience; they are more easily understood and relate more directly to individual managers. On the other hand, the disadvantages are that it is difficult to serve the needs of all audiences in one document and it is more expensive to print.

The second option is to incorporate it as an environmental section in the annual report of the Port Authority. In this case, the strengths are that the links between environmental and other financial and management concerns are emphasised, and that it may be cheaper to publish than a separate report. The weaknesses are that this alternative is not focused on specific stakeholders, and it will probably be less comprehensive than the first option. Pressure is rising for ports to widen their scope to social implication. Therefore, more and more, ports are joining environmental and social reporting into what is called the Corporate Social Responsibility (CSR). Examples of social measures include employee statistics and conditions or community support and involvement.

The third option is to have a web-based report; the positive points are that it saves on publishing costs, it is environmentally-friendly, it may have a wider audience (including international), and it could be updated if needed. The main disadvantage is that not all interested stakeholders may have access to the Internet or find the report easily.

All in all, since printing can be expensive and has an impact on the environment, it is suggested to make the document available electronically (uploaded on the port's website), and print it on demand for interested stakeholders.

5. Creating an Environmental Report

Before writing an Environmental Report, it is necessary to follow several steps. According to Northern Ireland Business Info (2013), these steps are:

1. Identify the audience of the report
2. Speak with the audience to understand their concerns and questions
3. Identify the internal data needed to calculate facts and figures for the report
4. Collect the data
5. Decide the format of the report
6. Produce and publish the report
7. Obtain feedback and review the impact of the report
8. Make improvements

The use of independent third-party assurance statements, such as audit-based verification of the environmental data, may add credibility to the Environmental Report and it may build stakeholders' confidence that the approach is robust and reliable.

For the production and publication of the report (step 6), many environmental reporting guidelines have provided organisations with a framework of what to include in an

Environmental Report. According to the Association of Chartered Certified Accountants (ACCA, 2001), these are the components expected to be found in a comprehensive Environmental Report:

1. **Chief Executive Officer's (CEO) statement**
2. **Environmental Policy statement:** a declaration of the Port Authority's public intentions and principles, which aim to prevent, reduce, or mitigate harmful effects on natural resources caused by human action (McCormick, 2001).
3. **Profile of the port:** an overview of the port, specifying its size (in terms of turnover, number of employees, annual cargo handled, number of TEUs, the number of passengers embarked and disembarked, among others), its location and its main operations and functions.
4. **Objectives, targets and achievements:** An objective is an overall environmental goal that a Port Authority sets itself to achieve, whereas a target is a detailed performance guideline, quantified where possible, that needs to be set and met in order to achieve those objectives (ISO, 2004). A comprehensive set of targets have to be mentioned in the report, as well as an explanation of the progress made towards these targets.
5. **Performance and compliance:** data and information on the current environmental performance of the port should be provided in the report, since it is the most important section. In addition, a report on legal compliance may be included, mentioning if the port has been prosecuted for any environmental offence in the reporting period and explaining the actions taken to make it less likely to happen again.
6. **Management systems and procedures:** a description of any recognised standard of Environmental Management System used in the port, acknowledging the external accreditations achieved (ISO, EMAS, PERS), and identifying key managerial responsibilities for the various aspects of the system (ACCA, 2001).

One of the most important purposes of any report is to show the environmental performance of the port. In order to provide a clear and meaningful picture of the Port Authority's environmental performance, data on the Environmental Performance Indicators (EPIs) monitored by the port have to be included in the report.

Although the standards for the implementation of an Environmental Management System (EMS), such as ISO, EMAS or PERS, require the continual improvement of the environmental quality through the use of environmental indicators, there is not a common framework as to which indicators use in port areas. Ports should identify its Significant Environmental Aspects (SEA) and select, implement and report the most adequate indicators related to their aspects. Some examples of environmental issues to consider for inclusion in the monitoring and reporting are:

- Carbon footprint (carbon emissions)
- Port and ship waste management
- Energy consumption
- Water consumption
- State of the environment (air, water, soil and sediment condition)
- Ecosystems and habitats
- Environmental management components (e.g. policy, training, EMS)

EPIs may be reported in *absolute data*, which is in absolute units of measurement such as tonnes or cubic metres; *normalised data* which relates two absolute figures such as the proportion of recycled waste to total waste or total CO₂ emissions per tonnes of cargo handled; and finally, *trend data*, which presents data over a number of years, such as total water consumption for each year from 2005-2010.

Trends and patterns over time based on consistent reporting may be considered more significant than absolute values. In addition, given the diversity of ports profiles, normalised data should be used, especially when comparing the performance of a port with the average of the sector. If the port has received any environmental complain or has incurred any environmental fines, it should be reported in the environmental review.

An ideal report also may cover the key environmental impacts generated by port's activities and operations, expressed clearly, avoiding vague phrases. Environmental best practices and technical solutions implemented, and research projects in which the port has participated may also be included. The credibility of the report may be greatly enhanced by the addition of an independent external verification statement. An excellent Environmental Report should enable the reader to form a complete view of the port's operations and environmental impacts (ACCA, 2001).

6. Global Reporting Initiative (GRI)

The Global Reporting Initiative (GRI) is a non-profit organization that promotes sustainability reporting (Global Reporting Initiative, 2013). It develops and disseminates globally applicable Sustainability Reporting Guidelines for voluntary use by organisations, reporting on the economic, environmental, and social dimensions of their activities, products and services (ACCA, 2001).

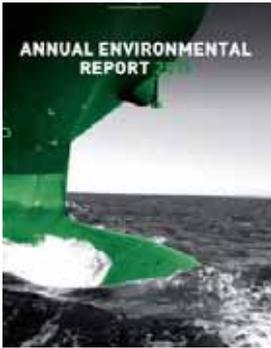
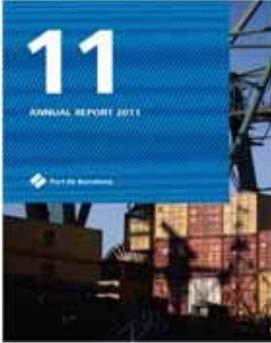
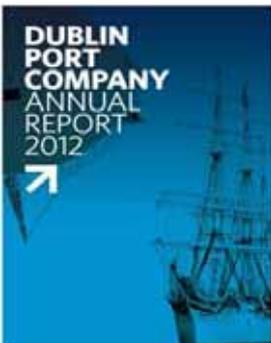
Since its beginning in 1997, the GRI has worked to design and build acceptance of the linked aspects of sustainability (economic, environmental and social). In March 1999, an 'exposure draft' of the Guidelines was released, and in 2000 the full version was completed (ACCA, 2001). Although the GRI is independent, it collaborates with the United Nations Environment Programme (UNEP) and works in cooperation with the United Nations Global Compact (UNGC).

Environmental transparency is one of the main priorities of the scope of the GRI, so that participants are encouraged to report on their environmental performance. To facilitate the reporting, the Guidelines have identified and suggest the monitoring of 30 Environmental Performance Indicators (EPIs), classified in 8 categories: materials, energy, water, biodiversity, emissions, products and services, compliance, and transport.

GRI Guidelines are widely used, with more than 5,000 organizations from 60 countries using the Guidelines to produce their sustainability reports (Global Reporting Initiative, 2011). These Guidelines apply to corporate businesses, public agencies, smaller enterprises, NGOs, industry groups and others.

7. Examples of environmental reporting

As previously mentioned, 64% of the European ports publish an annual Environmental Report or review (ESPO, 2013). This section aims to demonstrate examples of European ports that have a proactive role in publishing an Environmental Report and upload them on the Internet. These data is obtained from the port's website and therefore from the public domain.

Port of Valencia	<p>The Port Authority of Valencia publishes a news bulletin every four months and a comprehensive Environmental Report annually, with around 100 pages. The port also has published a wide range of environmental publications. There are two guidelines, namely 'Guidelines for good environmental practices in ports' and 'Guidelines for the Birds of the Port of Valencia'. Another publication is the 'Environmental initiatives in the Port Authority of Valencia'. The authority also has published two books.</p>	
Port of Barcelona	<p>The environmental department of the Port of Barcelona prepares every month a 'Report on the state of the environment'. It includes information on the concentration of selected parameters of the air quality of the port area. At the end of the year, an annual report on the state of the environment is produced.</p> <p>The port also has elaborated a guideline, titled 'Guidelines for avoiding soil contamination'. In addition, the annual report of the port includes a section on the environmental performance.</p>	
Port of Dublin	<p>The Port of Dublin publishes yearly the Annual Report which includes a section entitled 'Environmental Matters'. The reports are uploaded on the port website since 2006. The Authority also has published, since 2009, the Dublin Port Carbon Footprint, a year report on the carbon emissions emitted by the port operations.</p> <p>The environmental policy is also made public and uploaded on the port website, along with the ISO 14001 and PERS certificates.</p>	
Port of Dover	<p>The Environmental Bulletin of the Port of Dover is another extensive and well-prepared port Environmental Report. The port has prepared the environmental bulletins since 2008. In 2012, the port has also published the first Corporate Social Responsibility (CSR) report. The port has published four separate policies, the Environmental Policy, the Energy and Water Policy, the Sustainable Development Policy and the Green Purchasing Policy. In addition, the port has made public guidelines for monitoring trawling, algae, benthic fauna, ornithological studies, air quality and water quality.</p>	

There is a large amount of other European ports that are a good example of environmental reporting. Many ports report on their Carbon Footprint, either in a separate report (e.g. Port of Oslo, Port of Gothenburg) or in their annual report (e.g. Port of Felixstowe, Associated British Ports, Rotterdam, Corunna, among others).

Conclusions

It has been demonstrated that the implementation of an effective port environmental communication and reporting procedure may bring a wide range of benefits to any Port Authority. Sector associations, such as the European Sea Ports Organisation (ESPO), strongly encourage ports to report on their environmental performance, at least once per year. In addition, it is an essential requirement of any standard for the implementation of an Environmental Management System.

Environmental reporting is significant not only for the individual port authority but also for the sector as a whole. International and National Port Organizations need to report on performance, trends and targets as they seek to influence the development and implementation of policies and legislation. A widening group of stakeholders including auditors can reasonably say "Show me the evidence" in terms of establishing a port authorities license to operate and competence to manage. Projects such as CLEANSHIP (2013) demonstrate the potential of a Port Index to report on capability and achievement in Environmental Management including the component of supporting best practice in shipping. ESPO itself reports on a range of Performance Indicators to profile significant trends for the sector as a whole (ESPO, 2012).

The culture of reporting is becoming more established in the European port sector with the percentage of ports that publish an annual Environmental Report increasing year on year. Examples of best practices of ports reporting their performance has been provided in this paper. They demonstrate that there are a wide range of existing options for reporting and that it is possible to select appropriate structures to provide useful, credible and valid reports for individual ports and specific circumstances.

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