

The “ECOPORTS” project approach on the Environmental Management System on Port Areas

Port Environmental Review System (PERS)

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1) Introduction

The **Port Environmental Review System** (PERS) is a tool designed to assist ports to implement the recommendations of the **ESPO Environmental Review**, which were that ports should:

- Prepare a publicly available environment policy setting out their strategies and methods of achieving objectives and scopes;
- Regularly review their plans to take account of legislative and other changes;
- Produce a publicly available Annual Environmental Review;
- Consider what environmental monitoring is required to assess their environmental progress;
- Establish a number of relevant environmental indicators with targets to measure progress;
- Consult adequately within the local community on their environmental program.

PERS is based on internationally recognized professional best practice, and yet, remains a port-specific system developed by **ports – for ports**. It is formulated to be flexible and capable of evolution so that it can be adapted to future changes in legislation and priorities for action.

The System defines a basic standard of good practice for the port sector. Ports wishing to progress to successively more comprehensive systems such as ISO 14001 or EMAS can do so by building on the PERS experience.

PERS will supply the basis for developing an environmental management system by identifying significant aspects, policy and performance criteria. A review, as part of PERS, will assist ports in setting objectives to improve performance on environmental issues as well as environmental management.

Improvements and benefits achieved by using PERS may include the following:

- Cost saving and improved management control
- Compliance with legislation
- Meeting customer expectations
- Demonstration of commitment
- Improved environmental performance
- Motivating the port authority towards Environmental Management
- Integrated environmental management
- Monitoring

The purpose of PERS is to assist ports to achieve the objectives of sustainable development and environmental protection.

Application of this methodology is voluntary, can be adopted by individual ports, port authorities and/or port industries in their own time-scale, and adapted so that it can be phased into their particular organization and circumstance.

This system concerns port-area related issues, port management and port-industry topics and has a voluntary basis.

It does not cover shipping, ship related reporting or other maritime issues based on maritime legislation or other maritime international agreements.

2) Methodology

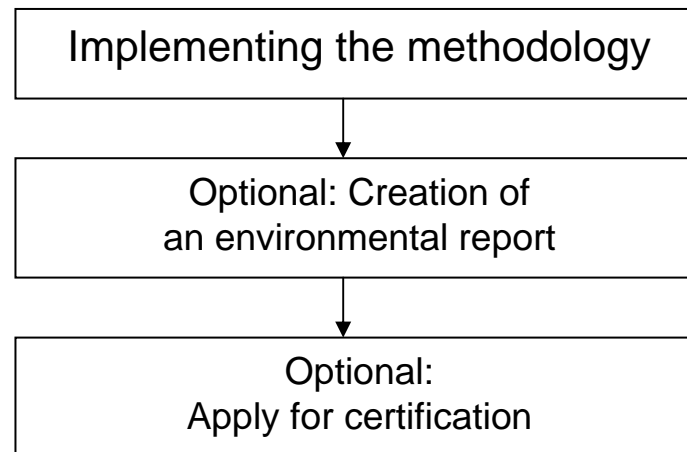
The methodology has evolved from the results of the previous ECO-information project for the port area and port industry, which resulted in the Self Diagnosis Method (SDM 1998).

This methodology draws on the experience of the SDM approach but focuses on providing the actual evidence of the environmental management performance. The information compiled can feed directly into the preparation of a periodic environmental report.

The approach adopted in this methodology has been checked against accepted international standards and examples of existing best practice

The Methodology enables the creation of a periodic Environmental Report demonstrating sustainable development and environmental protection to stakeholders and the general public.

On completion of the following scheme, Port Authorities may voluntarily apply to qualify for the Certificate of Verification of the Port Environmental Review System, independently assessed by an international Certification Body. This provides acknowledgement of good practice.



3) Structure

- Port Profile
- Environmental policy statement
- Register of environmental aspects and legal requirements and Performance Indicators
- Documented responsibilities and resources related to environmental aspects
- Conformity review on legal requirements and policy
- Environmental report
- Selected examples of best practice

4) Port Profile

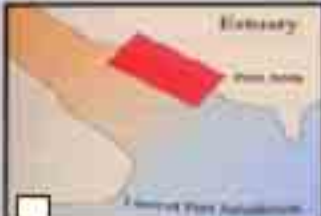





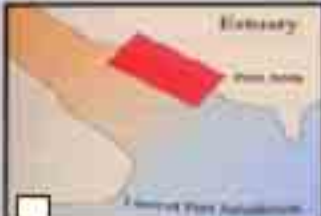





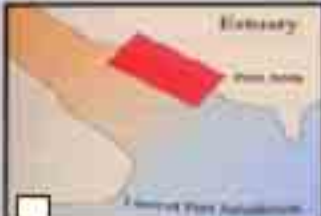





The purpose of this section is to provide a summary of the major characteristics of the port in terms of its legal status, commercial activity and environmental setting.

The information provides useful background information about the port because it indicates the range and scope of activity, the geography of the location, and general facts concerning ownership and organization.

It is acknowledged that **each port is unique**. It is important to be aware of the local circumstances in which the port's environmental management programme is operated.

The summary also acts as a useful checklist for the port itself and can be used directly as an input to the port's internal Environmental Review or introduction to the port's own (Annual) Environmental Report. (Such information is also helpful to the reviewer if the Port Authority decides to voluntarily apply for the Certificate of Verification)

2. Port Location and Port Area

<p><i>Please tick the geographic setting of the Port:</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center; padding: 5px;">  <p style="text-align: center;">Estuary</p> <p style="text-align: center;"><input type="checkbox"/></p> </td> <td style="width: 50%; text-align: center; padding: 5px;">  <p style="text-align: center;">River</p> <p style="text-align: center;"><input type="checkbox"/></p> </td> </tr> <tr> <td style="text-align: center; padding: 5px;">  <p style="text-align: center;">Marine Inlet</p> <p style="text-align: center;"><input type="checkbox"/></p> </td> <td style="text-align: center; padding: 5px;">  <p style="text-align: center;">Embayment</p> <p style="text-align: center;"><input type="checkbox"/></p> </td> </tr> <tr> <td style="text-align: center; padding: 5px;">  <p style="text-align: center;">Protected Coast</p> <p style="text-align: center;"><input type="checkbox"/></p> </td> <td style="text-align: center; padding: 5px;">  <p style="text-align: center;">Engineered Coastline</p> <p style="text-align: center;"><input type="checkbox"/></p> </td> </tr> </table> <p>Other location: _____</p>	 <p style="text-align: center;">Estuary</p> <p style="text-align: center;"><input type="checkbox"/></p>	 <p style="text-align: center;">River</p> <p style="text-align: center;"><input type="checkbox"/></p>	 <p style="text-align: center;">Marine Inlet</p> <p style="text-align: center;"><input type="checkbox"/></p>	 <p style="text-align: center;">Embayment</p> <p style="text-align: center;"><input type="checkbox"/></p>	 <p style="text-align: center;">Protected Coast</p> <p style="text-align: center;"><input type="checkbox"/></p>	 <p style="text-align: center;">Engineered Coastline</p> <p style="text-align: center;"><input type="checkbox"/></p>	<p><i>Please describe the area of the Port:</i></p> <p>Area of Port's land (km² or specify units): _____</p> <p>Further detail: _____</p> <p>Port jurisdiction limit onshore (km or specify units): _____</p> <p>Further detail: _____</p> <p>Area of Port's navigable water (km² or specify units): _____</p> <p>Further detail: _____</p> <p>Port jurisdiction limit offshore (nautical miles): _____</p> <p>Further detail: _____</p>
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Total quayage (m): _____	Length, largest vessel (m): _____						
Maximum draught (m): _____	Draught, largest vessel (m): _____						
Tidal range (m): _____							
Further detail: _____							

5) Environmental policy statement

The environmental policy statement is a **declaration** of the port authority's public intentions and principles in relation to its overall environmental performance, which gives a framework for action and for the setting of its environmental objectives and targets.

The scope of the environmental policy refers to the areas, issues or activities addressed in the statement and should cover significant environmental impacts of activities, products or services, for which the port, port authority or port industry is directly responsible, or with which it has close involvement. It should provide a basis for action for the port authority involved.

With regard to major environmental issues for which the port authority does not have a legal responsibility *per se*, it may be considered advisable to acknowledge awareness of their existence and knowledge of the other agencies or organizations involved

The document should consist of a series of short statements including the following, where appropriate:

A broad declaration of the port authority's general approach to environmental issues, the status of environmental considerations in its business plan, and an indication of its priorities of action.

There should be a statement specifying general qualitative objectives concerning the main environmental issues in the particular port.

Port authorities may choose to include brief statements on commitments to:
train employees on environmental issues,
reduce resource consumption,
encourage improved environmental performance by other port users,
identify performance indicators and implement environmental monitoring.

Port of

Environmental policy

Port of shall contribute to a long-term sustainable development by minimising the emissions to air, land and water in all our operations. The activities and services of the port concentrate on.....with associated environmental effects and impacts on.....

To minimise environmental effect and impact we shall:

- Have an appropriate environmental management programme that guides and improves our environmental performance, focuses on prevention of pollution, and pays due regard to nature conservation.
- Give all employees training on environmental issues and encourage them to actively regard the environment in their daily work.
- Keep ourselves informed about, comply with, and as far as it is economically justified, present environments legislation and other environmental requirements to which we subscribe.

...

Signed by.....Senior Manager Port of

6) Register of environmental aspects and legal requirements and performance indicators

The port shall identify the **significant environmental aspects** of its activities, products and services, that it can control and over which it can be expected to have an influence (e.g. tenants, agencies, sub contractors, port users). This information should be kept up to date.

The port shall identify legal and other environmental requirements that are applicable to the **environmental aspects**. This information should be kept up to date.

The environmentally significant aspects identified and documented, and their impacts and legal requirements, shall be recorded in a format named Environmental Aspect Register.

The port shall identify 5 – 10 environmental **performance indicators** relevant to the major environmental aspects of the port in order to facilitate monitoring of the environmental performance.

An environmental performance indicator is an information tool that summarizes data on environmental issues to show the overall status and trends of those issues, and measures the success of environmental policies in achieving their desired results.

Environmental Performance Indicators should measure the environmental effects of port operations, the efforts of the port to control or reduce environmental effects and the quality of the port environment.

- percentage of contaminated dredged material
- percentage of beneficial use of dredging material
- noise from port operations
- number of incidents
- water quality: e.g. Total suspended solids, Ammonia, Dissolved oxygen, pH, Salinity, Temperature etc
- air quality: e.g. Carbon Monoxide, Carbon Dioxide, Sulphur Dioxide, Nitrogen Dioxide, Particulate dust etc

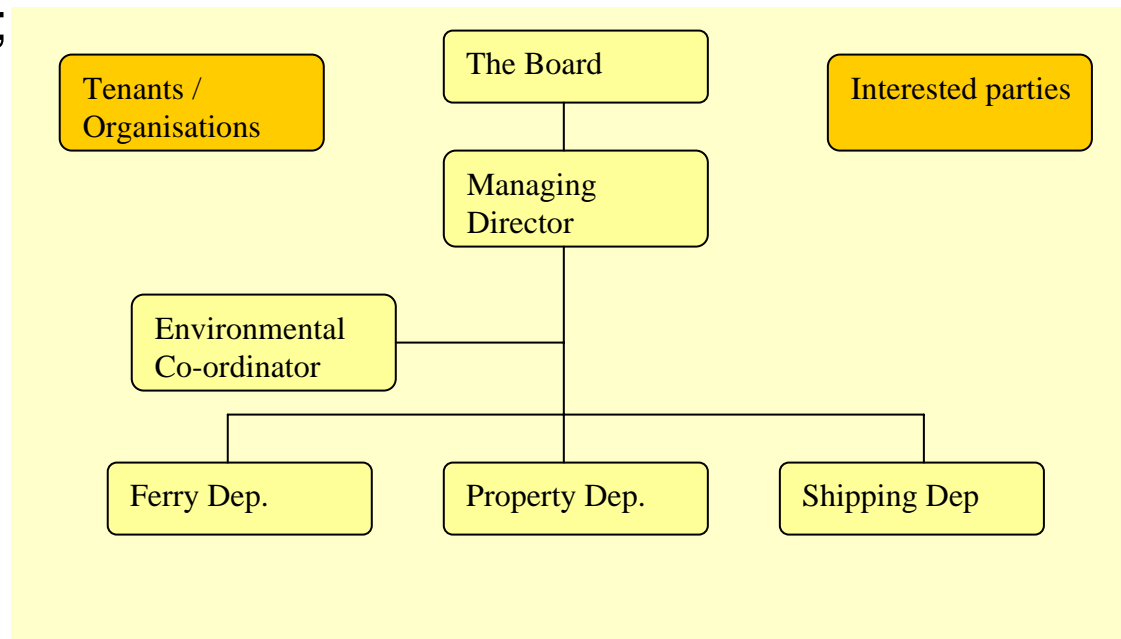
7) Documented responsibilities and resources related to environmental aspects

The purpose of this section is that the Port Authority can demonstrate that it has adequate and appropriate management organization and personnel in place to deliver the objectives specified in the policy statement.

Documents are required to show the management organization, to identify designated representatives, their responsibilities and authority. The actual composition and responsibilities of the environmental management structure will depend on the circumstances of the individual Port Authority and will reflect local factors such as legal status, size of port, activity profile and direct/indirect responsibilities etc.

The Port Authority should provide details of the following aspects:

1) structure of organization and the position of identified staff (a table and/or flow diagram which identifies individuals, groups and responsibilities);



2) environmental responsibilities of key personnel identified by name, job title/position and Department/Office/Agency

3) a general statement or description of the resources allocated specifically for port environmental management.

8) Conformity review on legal requirements and policy

The organization should ensure that environmental performance is in compliance with legislation and the port's policy with regard to the environment. The conformity review **does not have to result in a compliance statement** for each legal requirement but **should provide information to identify improvement actions** to achieve, maintain or restore compliance with legislation or other standards.

In order to identify any major gaps with environmental policy objectives, the port authority shall provide documents which demonstrate:

- review of compliance with port environmental policy,
- review of compliance with environmental legislation,
- and to provide a summary of priorities for improvement plans based on the above.

9) Environmental report

The aim of the environmental report is to provide environmental information to senior port management, the public and other interested parties regarding the environmental impact and performance of the ports major environmental aspects. It may be regarded as a major communication tool with these parties.

The report should include reference to continual improvement of environmental performance of both the organization itself and the environmental quality.

The minimum information needed to produce the environmental report, is the same as has already been compiled for PERS. Therefore, an efficient way to produce an environmental report is to combine the collected information and the filled-in formats into a single document and make it publicly available.

An example of a report format could be:

- Formal section: areas and activities, port facts and figures, licences in force, authorizations for operations, statement on environmental management system
- Activities section: Organization, aspects and legislation, detail of operations by terminal. Workshop etc, impacts from discharges and emissions, waste, energy use
- Incidents, accidents, actions and measures during the year
- Declaration of calculated or estimated emissions and discharges
- Relevant appendices such as detail on waste management, use of chemicals

10) Selected examples of best practice

Port Authorities can demonstrate their competence in environmental management by providing examples of successful approaches to environmental issues or solutions to environmental problems that they have developed.

Examples of best practice are positive indications of the port management's ability to deliver environmental protection and sustainable development. They provide the reviewer with tangible evidence of achievement, and can contribute to the EcoPorts Foundation's database of port-sector derived solutions for the mutual benefit of participating port members.

The selection and choice of best practice examples and solutions to environmental problems is left to the discretion of the port itself.

SOLUTION FORM	
Port of:	
1. Concern	
Describe the original problem in detail by explaining the cause for concern, identifying the major issue and listing the related port activities.	
<p><i>For example, works problem of dust and following impact on air quality associated with cargo handling and on-site storage...</i></p>	

2. Environmental Issue		
Select issue details:		
Air Quality	General	<input type="checkbox"/> No Further Details
	Industrial	<input type="checkbox"/> Emissions
	Monitoring	<input type="checkbox"/> No Further Details
	Odours	<input type="checkbox"/> No Further Details
	Petroleum Industry	<input type="checkbox"/> Emissions
	Ship Exhaust	<input type="checkbox"/> Cargo Vessels
		<input type="checkbox"/> Ferries
		<input type="checkbox"/> Tankers
Vehicle Exhaust	<input type="checkbox"/> Freight Traffic	
	<input type="checkbox"/> Site Vehicles	
Cargo	Spillage	<input type="checkbox"/> No Further Details
		<input type="checkbox"/> Dry Bulk

3. Motivation

Detail the reason for response to the concern by ticking the appropriate key word(s) and adding further explanation

- Legislation**
- Port/City development**
- Costs**
- Complaints**
- Environmental Quality**
- Other**

For example:

Complaints from local community and pressure groups and perceived potential threat of spillage and leakage to air and water courses...

4. Solution description

Identify the category of solution by ticking the keyword(s) that applies

- Managerial**
- Technical**
- Procedural**
- Regulatory**
- Financial**
- Other**

4.a Chosen solution

Give a brief description of the chosen solution

8. Costs	
Provide a description of the costs and resources that were required to implement the solution in terms of time, training, finance, administrative effort, interruption to commercial activity etc. Give details of the investment, fixed cost and variable costs of the operation! Mention any specific problems encountered during implementation	

9. Benefits	
Describe the main benefits of implementing the solutions in terms of improvement of environmental quality, reduction in resource consumption, financial savings, improved public relations, increased efficiency of operations, protection of fauna, flora and habitat etc! Is the situation currently monitored?	