

THE STORY OF ECOPORTS

BUILDING A WORLDWIDE NETWORK FOR SHARING EXPERIENCE IN PORT
ENVIRONMENTAL MANAGEMENT

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The early nineties

How it all started...

Traditionally, port authorities were more concerned about the impact of the environment on their own activities and operations, rather than vice versa. The impacts of wind, waves, tides and currents on navigation and quayside procedures along with the demands for dredging took priority over ecological and conservational considerations. Through the 1970s-1980s, even with growing awareness of the environmental imperative, compliance with legislation remained the main driver for port authorities to consider initiating any form of Environmental Management Programme.

However, as environmental issues broadened in scope and public awareness and the number of interested stakeholders increased, each with their own expectations of the role of the ports, so the need for a credible policy from the sector emerged. The definition of environmental management, the functional organisation necessary to deliver compliance with legislation and environmental protection to the highest, practicable standard has expanded dramatically over time so that it now includes topics not only of protection of habitats and ecosystems, but also of cost and risk-reduction, climate change and sustainable development.

By the same token, the geographical scale of considerations has steadily evolved from quayside to port area, and now includes interrelated links between ports, their cities, hinterlands and the associated logistic chain. Given the dynamics of world trade and the transboundary nature of pollution pathways, the environmental performance of local, individual port authorities is part of the total impact of the international port sector, which, with the shipping industry, are major players in the whole debate concerning today's focus on climate change and sustainable development.

In **1992**, the European Commission adopted the Habitats Directive (the Council Directive 92/43/EEC of 21 May 1992) on the conservation of natural habitats and of wild fauna and flora. The Directive aimed to promote the maintenance of biodiversity. Taking account of economic, social, cultural and regional requirements created new expectations of what ports should do. They had to become much more professional and accountable in terms of environmental management and the Directive was a very important trigger for the sector's response. The Directive formed the cornerstone of Europe's nature conservation policy with the Birds Directive and established the EU wide Natura 2000 ecological network of protected areas, safeguarded against potentially damaging developments.

Taking up on the challenge in **1994**, the European Sea Port Organisation (ESPO) launched a Code of Practice for port environmental policy. This responded to the growing interest in effective environmental management in the maritime sector to meet the challenges of increasingly stringent regulations. It also reflected the development of standards for environmental management systems (ISO 14000 and the European Eco-Management and Audit System, EMAS). However, it became clear that an exchange of experiences and best practice between port managers would be desirable in order to increase the cost-effectiveness of developing new environmental policies for individual ports where possible in a competition-neutral manner.

A useful research report at the time, based on a questionnaire survey of port authorities and largely facilitated through the British Ports Association (Validity of scientific criteria for environmental auditing of port and harbour operations: EPSRC, UK Government's Office of science and Technology, GR/J67703, 1995), got port professionals to think more collectively about environmental issues, which was the first time that this had been done. The results gave ESPO an indication of the extent to which its Code of Practice was being implemented and also, for the first time, identified the main environmental issues. Similar information is still collected and reported today through the EcoPorts Self Diagnosis Method (SDM) database.

The emerging key policies at the time were absolutely fundamental in initiating, driving and delivering the sector's response to its environmental liabilities and responsibilities, and the expectations of an increasingly vocal and demonstrative circle of stakeholders. The environmental policies of ESPO set the remit in 1994. And arguably they continue to characterise the sector's approach today. It may reasonably be argued that they have not only stood the test of time, but having evolved in detail whilst still maintaining principle, they are **as relevant and pertinent for today and the future** as the European port sector plays its role in the debate on local and global environmental issues. It is significant that an increasing number of port authorities and organisations outside Europe are adopting the ESPO-initiated environmental policies, principles and standard.

Policies and Proposals



The prime policy statement in the early nineties was **“compliance through voluntary self-regulation”**. This was the mantra, repeated time-and-again to concentrate effort and to assist in the development of a strategy towards the environment that was appropriate to the distinctive characteristics and requirements of the port sector. ‘Stalwarts’ of EcoPorts like David Whitehead, the then Chairman of ESPO’s Environment Committee, championed the phrase to ensure that port professionals and academics alike understood that compliance was non-negotiable, yet every port was unique and thus deserved and required the option to act in accordance with legislation but in a manner appropriate to the conditions and circumstances of its own geographical and operational profile.



The second policy objective was to achieve a **‘level playing field’** in terms of the quality of environmental management achieved by port authorities. Although the environment per se was agreed to be precompetitive, ESPO wished to see steps towards equal implementation and enforcement of environmental legislation and regulations. A most important consideration in the nineties was distortion of competition because many ports didn’t accept new rules. The member states introduced the new Environmental Directives in their legislation system but the interpretation of the laws could differ between member states and between ports, causing substantial cost differences for similar laws or in other words, distortion of competition – hence the drive for a level playing field.



The concept of **‘fixed goal-posts’** also figured in policy ambitions at a time when a plethora of Directives and Regulations were beginning to appear from international, EU and national initiatives. In this context, ESPO also identified the objective of **‘retaining influence’** with the EU and other regulatory bodies by being proactive in terms of environmental management.



At the same period, ESPO representatives and members realised and acknowledged that environmental management implied far **more than just compliance**. In the highly competitive world of port economics it was recognised that costs and efficiency were also prime considerations, and if environment was to be acknowledged as being genuinely precompetitive (the common challenges and transboundary nature of environmental aspects were well-accepted), then there was scope for **collaboration and cooperation** in order to share costs and avoid ‘reinventing the wheel’ in relation to environmental management options.



It was at this stage that perhaps one of the most profound concepts of ESPO’s policy emerged: **‘ports-help-ports by the free exchange of knowledge and experience’**. This is arguably the hallmark of EcoPorts. At the same time, another key concept was championed by Herman Journée (at that time, Port of Amsterdam), i.e. a **‘top-down, bottom-up’** approach as the only effective way to integrate the best interest of individual ports with the overall strategic governance of the sector as a whole.

Building the Network: ECO-information

In **1994** a group of seven ports¹ took the initiative to define a collaborative research project to improve the exchange of information on port-related environmental issues. This project was initiated based on the experiences from the previous Environmental Challenges for European Port Authorities (ECEPA) projects, led by Henk de Bruijn (Port of Rotterdam) on soil recycling and noise reduction. The experiences from earlier projects on ports and environment identified the need to summarise and share the existing knowledge that port authorities obtained through professional practice.

The sector recognised that a good deal of experience was available, but not easily accessible. Also, the need to create a ‘common language’ was expressed by the ports in order to understand each other’s circumstances and challenges, and the value of apparent options and solutions. It was also agreed that a common review method or checklist of key components of environmental management would be extremely helpful to the busy port professional manager tasked with environmental responsibilities but often, at that time, in charge of other port operations as well. It was suggested that a **unified approach to environmental management in Europe would facilitate the declared ideal of collaboration and the free exchange of knowledge and experience**. This was an innovative step in itself as many ports were uncertain about their liabilities and responsibilities in relation to those of their tenants and operators, and there was caution expressed about sharing information in the competitive world of the port sector. Kees Joosten proposed the development of a “Self Diagnosis Method” (SDM) based on the idea that if port managers could be provided with a tool to assess their environmental situation, they would be able to plan their actions (and allocation of scarce budgets) in a more appropriate manner and focus their programmes on the priority issues.

Finally, port environmental managers were persuaded to develop tools to demonstrate good practice in the fields of daily operations and environmental research, especially to third party stakeholders (industrial clients, local and national governments, NGOs, pressure groups, local communities, etc.). A project plan for [‘ECO-information in European Ports’](#) was prepared in October **1994**, following intensive discussions during the ECEPA workshop in Barcelona. A draft proposal was discussed in Antwerp in **1995** and finalised during the ECEPA workshop in **1996** in Piraeus. The final project proposal was prepared and submitted in the Transport Programme of the European Commission. The proposal was granted in **1997** with 710.000 Euro (EC under Transport RTD Programme of 4th Framework).

Thus, EcoPorts, in its origin and early phases of development, goes back to 1997 when it emerged as a concept from the EC research programme **ECO-information** in which ESPO provided links and contacts with professional port sector practitioners and they were joined by other partners from academia and industry.

¹ Prime Partners: The Port of Amsterdam, British Ports Association, Port of Barcelona, Port of Antwerp, Port of Gothenburg, Port of Rotterdam and Port of Genoa.

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Associated Partners: Copenhagen, Dublin, Helsingborg, Oslo, Piraeus, Marseilles, Malta Maritime Authority, Ghent, Helsinki, Stockholm and Associated British Ports.

Observer ports: London, Dunkirk, Bilbao, Drammen, La Coruna, Turku and Lisbon.

Research Partners: The Universities of Cardiff, Catalunya and Amsterdam

WP 9 Partners: ANPA, SOGESCA, CREOCEAN, IFREMER, TEA Consult and the Province of Genoa.

Project Management: Willems & van den Wildenberg

A particular role was played by the then Strategic Development Director of the Port of Amsterdam, Herman Journée and British Ports Association Director, David Whitehead, both of whom served periods as Chairmen of ESPO's Environment Committee – they were able to build on the groundbreaking initiatives of the Port of Rotterdam that had been expedited by Henk de Bruin and Kees Joosten.

The **objective of the ECO-information project** was to **develop and test a dedicated information system for all types of ports and port authorities** designed to facilitate port environmental management. This system was required to be cost-effective, environmentally effective and practicable.

The **SDM**, developed as a user-friendly, generic checklist of the main components that would reasonably be expected in any credible Environmental Management System (EMS) became the corner-stone of the whole EcoPorts concept and has stood the test of time right up to the present day with its periodic updates in line with changing legislation and international standards. It is as appropriate today as it was originally for a port authority just starting out to develop a certificated EMS, and with its SWOT and gap analysis service available as a voluntary option, it remains a time and cost-efficient review procedure for ports working to attain or renew international EMS standards such as ISO 14001, EMAS or the port sector's own, internationally recognised standard PERS (Port Environmental Review System).

ECO-information (1997-1999): policy implications and deliverables



ECO-information partners at the progress meeting in the Port of Gothenburg, 3 & 4 June 1999 near completion of the ECO-information Project (started 1997).

The **ECO-information Project 1997-1999** researched, developed and tested the environmental issues that both reflected and influenced policy at a variety of levels. The research pathway and results were made public in the Final Report, '[ECO-information in European Ports – Sharing knowledge towards environmental self-regulation in port-city areas](#)' contract no. WA-97-SC.1132. Amongst the policy implications from the ECO-information Project were the following:

1) Integration of the environment into European ports

One of the European Commission's objectives was to integrate as extensively as possible good environmental practice across the full range of transport, industrial and commercial activity. Recent statements by the EU Environment Council had indicated that member states wished to integrate environmental protection into all aspects of the Single Market. The ECO-information project therefore provided a means of doing this throughout the EU port sector. For an integrated approach towards tackling the ports' environmental issues on a European scale, an independent intermediary for coordinating environmental information exchange, was deemed to be indispensable.

2) Practical approach on a European sector scale is essential

Problems of ports are as diverse as ports themselves. However, many of the port problems have similar characteristics. Tools such as the ECO-information Database, the Self Diagnosis Method (SDM) and the ECO Methodological Guide were helpful to all European ports in finding new options for their environmental problems.

EU ports policy – Green Paper issues

The ECO-information project was also in line with the Commission's and the port sector's long-term policy of creating a sector, which operates independently, recovers costs from users and can respond to commercial influences.

3) Implementing and framing legislation

Implementation and enforcement of legislation was an important point of discussion, since new and innovative environmental solutions could be impeded by existing legislation. The ECO-network could be used to influence the identification and selection of reasonable and practicable parameters for future policy and legislation.

4) Setting and improving industry standards

A further vital consideration was the standard being achieved by ports across the range of their environmental responsibilities. International standards and schemes such as EMAS were available, but tended to be more suited to larger, industrial organisations with a high degree of control over the effects of their operations. The ECO **Self Diagnosis Method (SDM)** could be particularly important to assess a port's current standard, to assess what improvements needed to be made, to compare performance with other ports and, for example, assess the extent to which the requirements of ISO and EMAS were actually being met. Although this might in some instances encourage ports to seek accreditation under those schemes, the SDM itself would provide a powerful tool for comparison and improvement. The ECO-information project underlined the necessity of active training programmes to bring the European environmental knowledge in ports on a joint higher level.

5) Towards a proactive approach and self-regulation

In two years of ECO-information (1997-1999), a culture of proactive environmental behaviour in ports was initiated – a major shift in culture. A pre-emptive approach in finding environmental solutions was always going to be far more effective than being a follower and reactive. The ECO-system provided a new tool for environmental assessment that had actually been used now by ports and resulted in a first step towards self-analysis in the field of port environment. **ECO-information became a model of a proactive approach and an important step in the direction of self-regulation.**

6) Improving environmental communication, accountability and reporting

Alongside information about their commercial activities in the form of annual accounts and reports, ports were beginning to publish more information about their environmental situation and policy. The data provided by the project could be used for this purpose so that port users, the communities in which they were located, but also the port CEO's could be kept informed of a port's environmental progress in terms of concrete costs and benefits. It may reasonably be stated that the steady evolution and implementation of environmental good practice throughout the European port sector has its roots in the ESPO-inspired, ECO-information Project initiated twenty years ago.

One of the substantive deliverables of ECO-information was the **Self Diagnosis Methodology (SDM)** which today not only serves as the practical checklist of EMS components for port authorities and precursor to the port sector's own EMS standard, PERS, but also forms the basis of the EcoPorts database, used by ESPO for its Environmental Report. The SDM has undergone periodic review and updating, the latest being in 2017.

Twenty years on from the original research, 'performance indicators' dominate reporting and discussion. Indeed, science-based KPIs can provide good quality evidence of trends and attainment (See PORTOPIA, for example). Statistics and quantified data can make immediate, at-a-glance impact. Such data and information is absolutely essential if the sector organisations and individual port authorities are to be able to **demonstrate quality environmental management**. It is still a tribute to the willingness of the sector that **281 ports cooperated with the ECO-information study**, hundreds have used SDM over the years, and the port authorities achieving the subsequent Port Environmental Review System (PERS) is increasing in number and geographical coverage. The tools and methodologies established 20 years ago are still fundamental to the sector's policies and practices today.

It may reasonably be submitted that overarching the whole EcoPorts endeavour from 1997 to today is the **trust and understanding** inherent in the EcoPorts network. The participants in ECO-information inspired not only a culture of change (the phrase "we don't do environment" comes to mind) toward a proactive approach to the port environment, but port authorities demonstrated their willingness to freely exchange knowledge and experience and to submit their procedures for SWOT and gap analysis through the Self Diagnosis Methodology. The agreement to maintain confidentiality was made at the Second progress meeting in Genoa in October 1998 and the trust remains the cornerstone between the port authorities and ESPO's reviewers and auditors. The EcoPorts network, inspired by the R&D project continues to develop as both a professional and social network that maintains principles and adapts to change.

Sustaining the Network: the EcoPorts Foundation (1999)

The EcoPorts Foundation (EPF) was established in **1999** by a group of European ports as a non-profit organisation to provide a networked platform for the continuation into the future of the products and services developed through the ECO-Information project and other European cooperation projects on sustainability in ports.

In **2002**, port administrations took one more major step by starting **ECOPORTS**, a 3-year cooperation project on 'information exchange and impact assessment for enhanced environmental conscious operations in European ports and terminals'. The ECOPORTS project, with 24 partners, was granted with an amazing €2.7 million subsidy from DG Transport (project budget €4.1 million). The main goal was to harmonise the environmental management approach of port administrations in Europe, to exchange experiences and implement best practices in respect of port-related environmental issues. The biannual conferences were key to engendering trust, the exchange of knowledge and experience and networking between a coherent group of port professionals. The dynamics of the network set the ground for demonstrating self-regulation and the adoption of PERS.

In three years of study, the consortium included over 100 European ports. The certification system (Port Environmental Review System) was successfully developed in cooperation with Lloyds Register. The **PERS-certificate** was issued for the first time in **2003** to the Dover Harbour Board and the first Environmental Code of Practice of the European Seaports Organisation ESPO (2003) was largely based on the findings and shared values of the ECOPORTS network.

By the end of the ECOPORTS project (**2005**) it became apparent that an 'environmental manager' had become a regular position in many port authorities along with a strategic plan, a budget and the ECOPORTS tools as guiding principles – objectives defined back in the 1990s! Following the end of the ECOPORTS project in June 2005, the EcoPorts Foundation continued the "ECOPORTS" approach, providing the platform for the continuation of the products and services developed through the ECOPORTS project. The Foundation also played an important role being a partner in other European cooperation projects and acting as a focal point for port environmental managers to exchange environmental best practice experiences.

Integrating the Network in the Port Community (2011)

On 1 January **2011**, the EcoPorts Foundation dissolved and EcoPorts was officially integrated within the structure of the **European Sea Ports Organisation (ESPO)**. The integration marked the start of a new era regarding port environmental management and sustainability in Europe. The European port sector had achieved significant progress in the field of environmental management during the previous 15 years and this had largely been driven through the longstanding close cooperation between ESPO and EcoPorts. The new way forward was warmly welcomed by all parties involved as it was expected to continue progress in environmental protection and sustainable development through the principle of voluntary self-regulation.

During the GreenPort Conference in Venice on 23-24 February 2011, ESPO officially launched the new EcoPorts portal (www.ecoport.com). The portal marked the integration of EcoPorts within the structure of ESPO. Through this website, ESPO manages the EcoPorts network of ports and offers the opportunity to port authorities within its broad membership to use the well-established EcoPorts tools of the **Self Diagnosis Method (SDM) and Port Environmental Review System (PERS)**. SDM and PERS have been updated and re-launched as part of the services that ESPO offers to its members (and updated again in 2017). EcoPorts membership fees ceased to exist and all ports that are part of the broad ESPO membership can now join the EcoPorts network on a voluntary basis. Ports and terminals outside Europe can access the EcoPorts tools via the ECO Sustainable Logistic Chain Foundation (ECOSLC, www.ecoslc.eu).

The new EcoPorts portal incorporated SDM as an online-based tool and provided visibility and credit to port authorities that achieved and maintained an “EcoPorts port” status. That status is achieved by any port registering within the system and completing the online SDM checklist, contributing in this way to the up-to-date maintenance of the European benchmark of performance in port environmental management. Once a port has become a member of the EcoPorts network, it can access the other EcoPorts tools: Comparison of the SDM score with the European average, SDM Review and Port Environmental Review System (PERS) certification. All of these tools are optional, but highly recommended in order to improve environmental performance.

Funding of continuity and development

Finance and resources were obviously fundamental at all stages, particularly during the periods in between major R&D Programme inputs.

- Initial funding was received by the European Commission (ECO-information: 1997-1999) plus there were financial contributions from ports and content contributions from universities.
- ECONET provided important support and contributions from the Board members of EcoPorts Foundation, assisted with maintenance of operations during the development period.
- EcoPorts Foundation was partially funded by a substantial membership fee from the Board Member Ports of the Foundation and a significant contribution from the “Port and Transport Ministry” of the Netherlands. The Foundation was critically important in maintaining continuity and facilitating development in between R&D Programmes.
- The ECOPORTS project (2002-2005) was particularly formative in the evolution of the network and was funded by money from the European Commission, Port Authorities, Lloyd’s register and content in kind from universities.
- A grant from the European Commission to finance a Secretariat for 2 years to create an organisation that could finance itself from selling training and certification was particularly helpful.
- The Foundation itself collaborated with various EC Projects to mutual advantage, and EcoPorts itself continues to play a significant role in R&D Projects (e.g. PORTOPIA).
- Since 2011, EcoPorts has been fully integrated into the European Sea Ports Organisation (ESPO).

EcoPorts' tools internationally

As the European port sector-inspired EcoPorts network became more established through the adoption of SDM, attainment of PERS, its workshop, conference and training contributions, and its Annual EcoPorts Conference, so interest and enquiries from port authorities outside Europe increased. Requests to participate in the network grew to the point where it was agreed to collaborate internationally by making the EcoPorts tools, methodology and EMS standard available through an MoU signed with the non-profit, neutral ECOSLC Foundation. This action reflects ESPO's policies of demonstrating compliance through voluntary self-regulation, being proactive and working towards the level playing field on the basis of the free exchange of knowledge and experience - nowadays in the global port sector.

Ports are formally recognised on the website of the independent, neutral, non-profit ECOSLC Foundation (www.ecoslc.eu) after they have introduced the SDM by being designated "EcoPorts Port". After they have been certified for PERS, they are entitled "EcoPorts PERS Certified Port" as part of the global EcoPorts network.

EcoPorts and its international, coordinating and administrative Foundation, EcoSLC were recognised by the American Port Authorities Association (**AAPA**) in 2013, and subsequently by the **African Ports Associations**, the Taiwan Ports International Corporation (**TIPC**), and the United Nations Environmental Program (**UNEP**). The **World Bank** recognises EcoPorts and its standard (PERS) as an international Environmental Management System and as an environmental risk prevention system in the context of ports' applications seeking investment from the bank. The most recent acknowledgement through MoU is with the **Arab Sea Ports Federation** (February, 2017).

Non-European ports can register on the ECOSLC website: www.ecoslc.eu. A brochure can be downloaded from the website that shows the steps and procedures involved.

The EcoPorts concept of ports-helping-ports through the free exchange of knowledge and experience is now available as a voluntary option for ports world-wide.

The Future of EcoPorts

In 2017, EcoPorts celebrated its 20th anniversary with nearly 100 ports from twenty-two different countries in its network. During the celebration at the ESPO conference in Barcelona, a new EcoPorts website was launched.

EcoPorts has demonstrably assisted the sector and individual port authorities in tackling the challenges of environmental management in terms of practicable options, reporting and the attainment of quality standard.

EcoPorts aims to strengthen its network and assist more European ports in being prepared to face the environmental challenges of tomorrow.

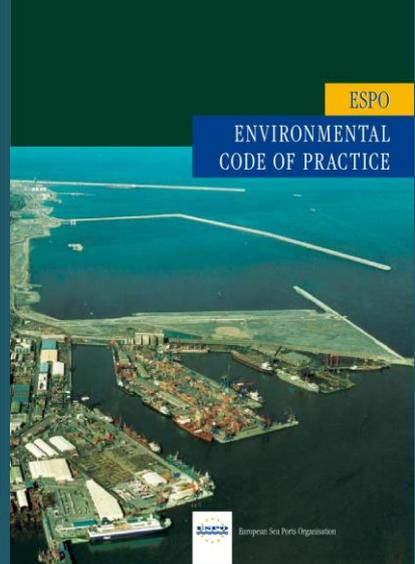
Green your Port, Join EcoPorts!



The EcoPorts network (status May 2017)







The image features a large, abstract graphic composed of two main wavy, organic shapes. The upper shape is a vibrant green, and the lower shape is a deep blue. They overlap and curve across the page, creating a sense of movement and flow. The background is plain white.

The author acknowledges with grateful thanks the contributions to the EcoPorts network made by all the port professionals, academic colleagues and industry representatives over twenty years of collaborative R&D and networking. He wishes to pay particular tribute to the then research students at Cardiff University who all contributed their academic skills to the EcoPorts Projects, and have since pursued professional careers, namely Dr Harvey Tyler-Walters, Dr Tim Stojanovic, Dr Antonis Michail and Dr Marti Puig.