



BULLETIN

FAL

FACILITATION OF TRANSPORT AND TRADE IN LATIN AMERICA AND THE CARIBBEAN

Sustainable port policies

Summary

Over the past few years, port operations have steadily grown in importance in Latin America and the Caribbean. Surging foreign trade in the countries of the region will continue to depend on, among other factors, timely adaptation of ports to meet new demands. Expansion and sustainable growth will only be possible with modern, higher-capacity infrastructure, environmental awareness and operations that are in harmony with the local community and with urban and social environs, as well as enhanced institutional solutions.


There is therefore a growing need for successful implementation of quality port policies leading to timely changes in management and active involvement of the private sector in all stages of the process. Sustainability in development and operations is one of the challenges that Latin American ports must face if they are to be internationally competitive moving forward. In these times of great economic, environmental and social uncertainty, the region's port authorities should shift their policies and strategies towards far more sustainable, viable and competitive scenarios.

Introduction

Projections show that for the countries of the region, foreign trade development will continue to depend on timely adaptation of their ports in keeping with new demands, on the efficient provision of port services and on international transport logistics. But there is increasing awareness at the local level that the options for sustainable expansion and growth of port operations hinge on the environment, surrounding communities and the host city. With sectoral authorities working to make ports more efficient, the initial policy goals were to modernize and decentralize the institutions that govern ports, bringing in private capital and management and, in general, awarding terminal and port concessions to qualified operators. The current scene is less promising, though. Process continuity and institutional capacity are lacking, modernization has been no more than partial and the focus has been exclusively on privatizing operations.

This issue of the *FAL Bulletin* introduces the concept of port sustainability, looks at recent experience with port sustainability in Spain and sets out some strategic recommendations for addressing this issue in the framework of port modernization in Latin America.

This study is part of the Unit's work on the Sustainable Transport in Ibero-America project financed by the Spanish Port System. It was written by Octavio Doerr from the ECLAC Infrastructure Services Unit. For additional information, contact octavio.doerr@cepal.org

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Puertos del Estado

Such are the problems facing the sector. The overall tendency has been to continue with this development model for new terminals, expanding infrastructure in private hands while overlooking other essential aspects of port development. Among these are new institutional developments in keeping with new demands, improved access, inland connectivity, improved port community outreach and sustainable development of the system along with its environs, the community and the city.

Against this backdrop, port cities face a two-fold challenge: to ensure growth both as an urban development hub and as a foreign trade logistics platform for an entire region. With logistics and urban and port concerns all vying for attention, planning and mechanisms for allocating (generally scarce) resources become a necessity. All of these activities and developments should be encouraged, but they often involve institutions that disagree and compete with each other instead of cooperating. There is a clear need for public sustainable development policy to address this issue for the sake of the common interest and good. This calls for a multidisciplinary approach leading to a modern solution for the port/city relationship that encompasses space, economic, cultural and environmental considerations. Such an approach should centre on the interests of the agents involved in port and city development and on the need for positive relations and partnerships among them if sustainable development outcomes are to be achieved.

The following sections highlight the principal aspects and factors addressed by the sustainability model followed for Spanish ports, and they provide strategic recommendations on how to approach the issue of sustainable port policies in the framework of port modernization in Latin America.

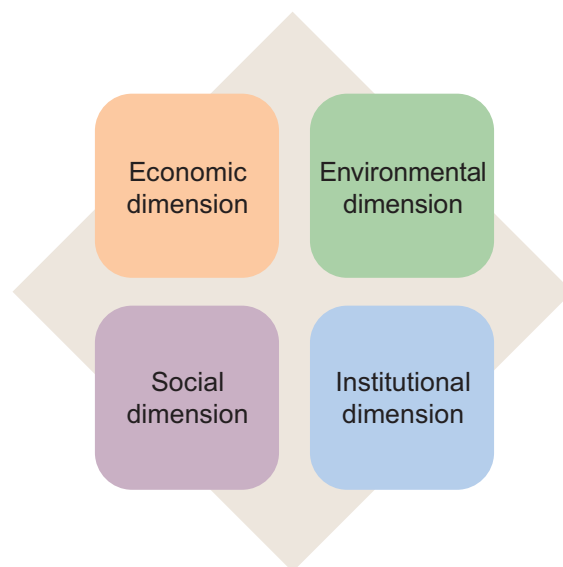
I. Sustainability as a concept and in practice

The concept of port sustainability

At first, sustainable development as a concept sought to make economic development compatible with the protection and appropriate use of natural resources. Its scope gradually expanded to other dimensions that were understood to be necessary for development, such as the social and institutional dimensions (see Figure 1). Sustainable development is now a widely-used concept; the idea of sustainability is increasingly applied by national transport authorities and in many other industries and fields of activity, spurred by initiatives that bring the environmental variable and

corporate social responsibility into the mix for strategic business management. But a significant methodological limitation has kept it from being even more widely followed. A critical and still-unresolved issue for sustainable development management is the availability of methodologies for evaluating the impact of actions by institutions and companies in each dimension of sustainability, defining the value and variables for quantifying the real contribution that such an approach makes to sustainable development management.

Figure 1
FOUR DIMENSIONS OF PORT SUSTAINABILITY



Source: Octavio Doerr.

Port operations are not foreign to these new paradigms for managing development. As ports grow larger they become very complex systems. As a rule, operations are patterned on the landlord model, in which port investments and operations are managed indirectly and the port authority provides land or infrastructure for third parties to conduct the principal activities and provide business-, efficiency- and security-oriented services. With the expansion of port activity come sprawling, complex port communities whose operators and agents provide multiple port and logistics services. Port facilities can take up large swathes of land, with operators conducting their activities, business, services and investments in all kinds of terminals and development zones.

In this framework, the port authority is leading and coordinating the port community and meshing the

opposing interests of many different agents while pursuing the common goal of promoting growth and port activities. Such a setting, where the port authority bears the foreign trade burden for an entire country, requires allocating large amounts of land that are usually within a host city and a community that is a source of human resources. Because port operations are complex and involve multiple actors, there is a clear need for management, investment and operating principles that guarantee the sustainable development of the community, the city and the logistics chain over time. To ensure such long-term growth that furthers economic development in the regions they serve, ports need a balanced approach to managing relevant economic, social, environmental and institutional issues.

But managing a port in a sustainable manner requires, first of all, designing a strategy that will contribute to sustainability in all four dimensions. Any strategic diagnostic review should focus on the factors that are essential for mapping a strategic agenda geared towards the sustainable development of a port system. These factors can be general or specific.¹ Among the former are those that stress the port's role as a key link in the transport chain, the hub that makes the maritime option possible. The challenge here lies in devising strategies that will enhance the development of maritime transport and make it more efficient. Another common factor is the fact that a port is an infrastructure providing services that are in increasing demand. Worldwide, the demand for maritime transport is rising along with trade flows and in some cases is even outstripping growth in the output of goods and services. Ports must service an ever-growing number of larger and larger vessels, putting even more pressure on port development. Among the challenges facing ports in this regard are the increasing size of modes of transport and rising productivity. Maritime transport has shifted towards larger vessels, necessitating higher dock productivity, deeper approach channels and new terminals in new locations. The demand for more space or land for ports is another critical issue. Ports could develop without a problem if land along coastlines were abundant and cheap. But quite the opposite is true: ports take up space along the coasts that is in short supply and has many alternative uses.

The port/city relationship and managing the port-urban interface can be a critical issue. There is usually a disconnect between port and city planning and actual operations. Port growth has often been planned at the expense of the city and in an uncoordinated way, leading to negative externalities and urban decay. This

lack of coordination is the main reason for many of the problems found at the interface between port and city. Addressing these issues calls for concerted port and city administration management. Drafting and approval of land-use plans requires coordination among administrations at the port, city, regional, federal and national level. Where they most frequently disagree is on points of contact between the port and the city, on assigning new uses to decayed industrial areas inside the port space and on how to connect city streets and port access roads.

The social hinterland of a port has become another key issue for port development. As drivers of economies, ports need to ensure that part of the economic value they create and capture for themselves is returned to the benefit of their environs (where the negative impacts of port operations are felt). Ports should therefore identify their social hinterland and craft policies and programmes that benefit the community, supporting efforts in education, health and general well-being.

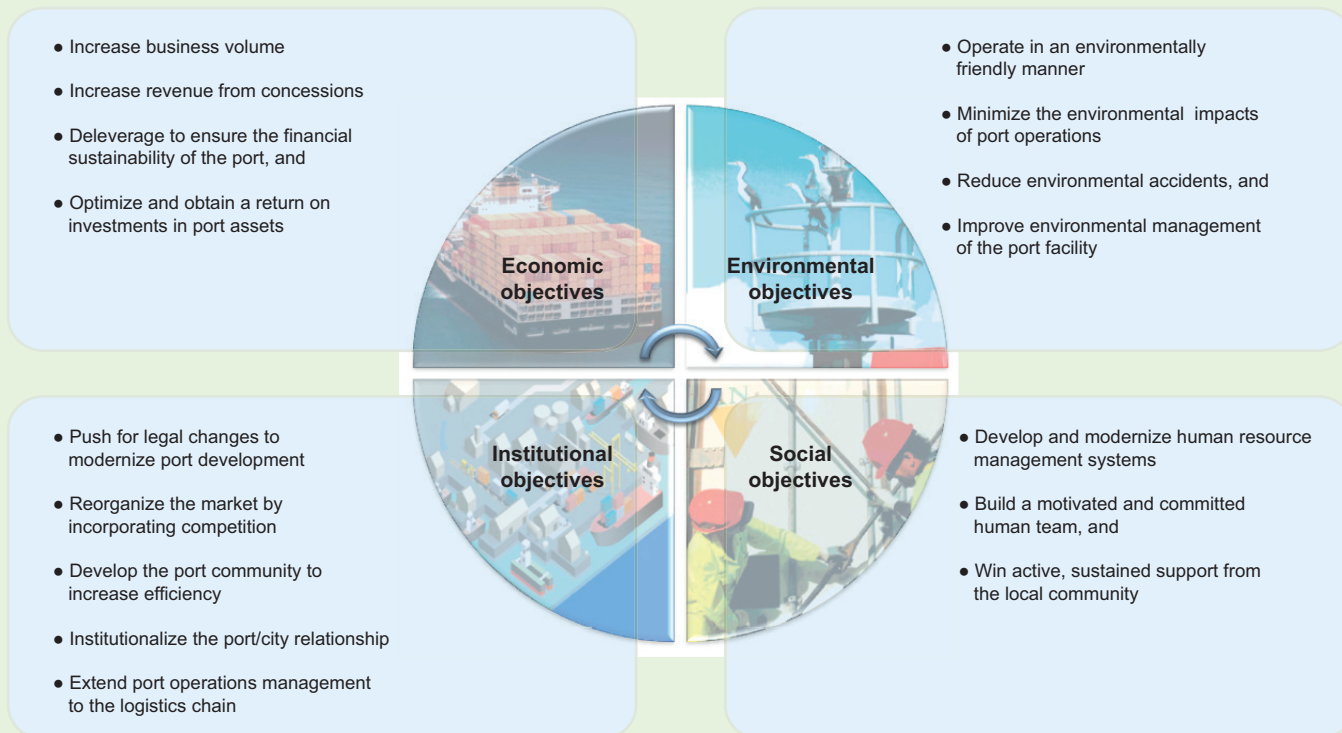
Using these strategic planning tools helps to define the economic, environmental, social and institutional goals that a port authority or company should fulfil in order to guarantee the sustainable development and growth of a port facility.² Economic goals can include increasing business volume, boosting revenue from concessions, deleveraging in order to ensure the port's financial sustainability and optimizing and achieving a return on investments in port assets. Some examples of environmental goals are to make operations environmentally friendly, minimize the environmental impacts of port operations, reduce environmental accidents and improve environmental management of the port facility. Social objectives can be internal or external and can involve developing and modernizing human resource management systems, building a motivated and committed human team and winning the sustained, active support of the surrounding community. Institutional goals can include pushing for legal and regulatory changes to modernize port development and operations reorganizing the port market by bringing competition and private management and investment into the mix in order to boost efficiency and expandability, modernizing the labour regime to make it more competitive, developing the port community to improve operational efficiency and process quality, optimizing the city/port relationship; and expanding port operations management to include the logistics chain and thus add value and involve the local logistics community in port development. Figure 2 summarizes the strategic objectives for all four dimensions.

¹ An exhaustive look at these critical factors may be found in CONAMA 7, Sustainable Development Summit, Port Sustainability, Working Group 23, November 2004.

² Port Authority of A Coruña, Port Authority of Valencia, Spanish Port System, Guide for writing sustainability reports in the Spanish port system, 2008.



Figure 2
STRATEGIC OBJECTIVES FOR THE FOUR DIMENSIONS OF SUSTAINABILITY



Source: The author, based on Guía para la elaboración de memorias de sostenibilidad en el Sistema Portuario Español, 2008.

In short, port sustainability in the broadest sense goes beyond environmental sustainability to encompass a port's ability to sustain commercial operations over the long run, addressing economic, social, institutional and environmental issues by means of projects and programmes.³ A port authority or company's sustainability policy should seek a safe working environment that protects worker health and promotes their personal development, requires social responsibility, ethical governance and accountability, manages environmental risks well, furthers the economic and social development of the environs and promotes equality and respect for cultural diversity as well as the involvement of stakeholders in port development and operations.

Sustainable development is still an emerging issue for Latin American ports. It is being approached more from an environmental perspective, and only in very few cases does it take in the social dimension. Institutional issues are what strategic port management most often overlooks. As an industry providing multiple services and involving many different players, ports can be less responsive and slow to adapt to real market needs. It is to be hoped that port authorities and companies in the region will make all four dimensions of sustainable development a priority and put them high on the strategic management agenda for each port facility.

Sustainable development approaches port performance from four different, complementary angles⁴ (see Figure 3): the economic angle (the need for institutions

³ Fernando González Laxe, Andrés Guerra Sierra, Federico Martín Palmero, Juan José Nóvoa Gómez, Carlos Otero Couto and Jorge Penela Núñez, Medición de la sostenibilidad en el Sistema Portuario Español: Propuesta metodológica a través de indicadores sintéticos de desarrollo sostenible.

⁴ KMPG, Sustainable Development Survey, Mexico 2009.

and companies —the port, in this case— to be profitable in order to last over time while maintaining levels of development and well-being); the social angle (to address the potential external and internal impacts of port development and operations, furthering social protection, access to education and culture); the environmental angle (to monitor the environmental impact of port operations, conserve resources in order to keep from mortgaging

the future and to protect ecosystem quality and carrying capacity); and the institutional angle (to ensure that operations, role assignment and organizational changes at port facilities are timely, efficient and effective and enable the organization to effectively adapt to changes in the market and the environs that support it while maintaining sufficient medium- and long-term financial, administrative and organizational capacity).

Figure 3
THE FOUR ANGLES OF SUSTAINABLE PORT DEVELOPMENT



Source: The author, based on Sustainable Development Survey, Mexico 2009.

Ports and their environs have long felt the environmental impacts of port facility development and operations. But over the past few decades port authorities in the region have been adopting international standards and coming into compliance with environmental laws, putting in place stricter environmental protection policies and practices (such as environmental monitoring). This has, to a certain extent, contributed to environmental recovery in the natural, territorial, urban and coastal spaces that port operations occupy. It is expected that adopting new sustainability policies will enhance this protection in a larger number of spheres of impact (social, economic and institutional). Sustainability is one of the challenges that the ports of the world (including those in Latin America) must address if they are to ensure their own international competitiveness moving forward. In the current global landscape of growing environmental and economic uncertainty, climate change and social disequilibrium, port authority management will be neither viable nor

competitive if the approach is not one of sustainable development.⁵

Sustainability in European ports

The General Assembly of the European Sea Ports Organisation (ESPO) has issued several codes of practice for improving sustainability management by European port authorities, including the Environmental Code of Practice (2004),⁶ the Code of Practice on the Birds and Habitats Directives (2006)⁷ and the Code of Practice on Societal Integration of Ports (2010).⁸ Stressing that sustainable port development and management have become an imperative, the General Assembly has highlighted the fact that society, stakeholders and customers are calling for

⁵ Ingrid Mateo-Mantecón and Pablo Coto – Millán, Cálculo de la Huella Ecológica de Autoridades Portuarias mediante MC3, Lisbon, July 2010.
⁶ ESPO Environmental Code of Practice, 2004.
⁷ ESPO Code of Practice on the Birds and Habitats Directives, 2006.
⁸ ESPO Code of Practice on Societal Integration of Ports, 2010.

ports to seek greater integration with the local economy. ESPO advises port authorities to use these codes of practice to help them manage environmental issues and protect nature and the habitats of birds and other species in port areas, stressing that long-term port sustainability will depend on addressing their social function appropriately. These codes of practice guide port authorities as they design projects and build cooperative synergies with cities as they work to improve port area quality and accessibility and promote a positive public image.

Sustainability in Spanish ports

Spain's ports are required to include sustainability criteria in their management and development;⁹ a guide for introducing sustainability reporting in Spain's National Port System was drafted recently.¹⁰ Port authorities are seeking to maximize social benefits by optimizing the mobility of cargo and people and the economic and social development of the economic zone each authority serves. The environmental policy that applies to Spain's ports calls for the maritime transport industry to comply with European environmental policy criteria.¹¹ The policy concerns, inter alia, the principles of caution and preventive action, the principle of remedying environmental damage and the principle that whoever pollutes must pay. It is geared towards conserving, protecting and improving the quality of the environment, protecting the health of persons, using natural resources prudently and rationally and promoting measures at the international level for addressing regional and global environmental issues.¹² Legislation applying to Spain's port system requires that the economic management of ports be carried out in a framework of sustainable development to ensure environmental protection and conservation and the appropriate integration of ports with nearby cities. These policies and directives, along with principles of transparency and disclosure of environmental data and public involvement in decisions affecting the environment that Spanish companies must comply with, make up a regulatory and policy framework for environmental and sustainability management of Spain's ports. On the basis of this framework, the Spanish port system has laid out strategic guidelines concerning the environment and integration with port environs. The goal is to track the strategic and operating objectives set for each of the port authorities.

Sustainable management in Spain's port system is defined as management that allows for growth in solid and liquid bulk container, general cargo and passenger traffic while decreasing the consumption of energy and natural resources, the generation of waste and the negative impacts on social systems and ecosystems in port areas of influence.¹³ Another Spanish port system approach to sustainability in the sector is described as a framework allowing for port business growth in terms of the number of containers, general cargo and passengers without negative social or environmental impacts.¹⁴ Sustainability criteria for management have already been incorporated in relevant Spanish port authority policies. For example, the port of Valencia has committed to developing an environmental management system that, in addition to making sustainable management a responsibility throughout the organization, extends this ethical commitment to all enterprises working in the public domain so that environmental policy encompasses clients, suppliers, government agencies and other enterprises in the sector.¹⁵

Spain's port authorities have not just incorporated environmental management policies and tools; they have also included communication tools for assessing and disseminating them. Port authorities must disclose environmental information through what are called environmental reports and, more recently, by means of annual sustainability reports regulated by the National Port System. Some Spanish port authorities¹⁶ issue annual sustainability reports that review performance in this management area and are disseminated to keep the entire port community informed.

Another component of environmental sustainability policy at Spain's ports is energy efficiency in the provision of services (eco-efficiency), i.e., changes that lead to a decrease in energy consumption while maintaining a given level of service or activity. Because Spain's ports see environmental protection as part and parcel of development, several port authorities are implementing eco-efficiency practices and seeking to put in place clean processes that conserve natural resources and decrease environmental impacts. These practices add value to port services, cutting down on energy, material, water and land use and encouraging recycling. Several port authorities (Gijón, Valencia, Bilbao, Motrico, Zaragoza) are implementing such measures.

With this shift from environmental management to eco-efficiency, several ports in Spain are boosting service

⁹ Under article three of Law 33/2010, port authority plans must provide for sustainability reporting pursuant to the methodology set by the National Port System.

¹⁰ Puertos del Estado, Propuesta de metodología para la elaboración de memorias de sostenibilidad de las autoridades portuarias, Madrid, April 2011.

¹¹ Cristina Crespo Soler, Vicente Ripoll Feliu, Ana M^a Trujillo and Arturo Giner Fillol, La Sostenibilidad Ambiental en el Sistema Portuario de Titularidad Estatal, XIII Congreso AECA, Armonización y Gobierno de la Diversidad, September 2005.

¹² Cristina Crespo Soler, Vicente Ripoll Feliu, Ana M^a Trujillo and Arturo Giner Fillol, op. cit.

¹³ Cristina Crespo Soler, Vicente Ripoll Feliu, Ana M^a Trujillo and Arturo Giner Fillol, op. cit.

¹⁴ Andrés Guerra Sierra, Planificación y Gestión Portuaria: Algunos Criterios de Eco-eficiencia, Encuentro Iberoamericano de Desarrollo Sostenible, Puertos del Estado, Madrid.

¹⁵ Port Authority of Valencia, Environmental Report 2009, Valencia, April 2010.

¹⁶ Port authorities of Valencia, A Coruña, Ceuta.

output and handling more cargo and vessels without this increase in output having a greater impact. This is a policy that enables ports to keep from increasing their environmental impact while meeting growing cargo and traffic demand, which often requires new construction and infrastructure. One management approach to this end is to monitor CO₂—equivalent emissions from port development and operations by calculating the carbon footprint of all impacts— either from generating waste or from consuming resources. For example, the Port Authority of Gijón has embarked on specific sustainability projects geared towards reducing emissions. Among these are installing solar panels for heating and other systems; regulating air conditioning more carefully; replacing lights and regulating dock lighting; replacing old transformers; engaging water supply network leak detection services and investing in leak prevention; implementing an ISO 14001 certified environmental management system for reducing waste; and installing anemometer towers to assess the viability of wind energy at the port.

II. Sustainability indicators and reporting

What is a sustainability report?

A sustainability report is a document disclosing the institutional, economic, environmental and social performance of a company or institution to its stakeholder groups.¹⁷ Because such reports create economic value for the issuer, they can also be seen as a strategic tool. They help companies measure and assess their own performance, thus facilitating strategies for continuous improvement. Reporting enables companies to ensure that their behaviour and their social agenda align with reasonable stakeholder expectations. These reports contribute to transparency, credibility and consistency between a company's operations and its public image. A well-prepared and distributed report will end up establishing consistent, useful and comparable communication and dialogue with stakeholders.

To be comparable, a report must comply with certain international parameters. There are international methodologies and standards for providing a balanced, objective accounting of an organization's institutional, economic, financial, social and environmental performance, thus making such reports comparable with other, similar ones. A well-prepared and distributed report can also be an effective tool for ongoing communication. Such reports have proven to be highly effective in establishing and maintaining solid ties with stakeholders.

Port sustainability indicators

One of the major challenges in sustainable port management is the availability of objective, reliable information on port authority management performance.¹⁸ Sustainability indicators make it possible to evaluate sustainable development performance. They go beyond sustainability reports to objectively monitor port authority management performance in this sphere. It is therefore clear that these indicators must cover all four dimensions of sustainability. They help port authorities monitor sustainable management, evaluate the impact of the programmes they conduct and change them when needed. The indicators also enable sustainable management benchmarking among ports in order to identify best practices and compare a port authority's performance with that of a similar industry. And they can be a marketing differentiator and boost market competitiveness. Applying these indicators throughout an entire port system would make exact sustainable benchmarking among ports in a given region or country possible.¹⁹

Reporting and indicators in the Spanish port system

Recently amended port legislation in Spain²⁰ requires that port authorities disclose environmental sustainability objectives and indicators for each port and issue an annual sustainability report drafted in keeping with an ad-hoc methodology. In December 2010 Spain's National Port System submitted an initial proposal for such a methodology, setting out the objectives, scope and content of these tools.²¹

These annual reports have two primary purposes: (a) to inform the public on port authority management, disclosing outcomes and progress related to sustainability and the interests of port environs: and (b) as a management tool, to facilitate diagnostic review, development and approval of port authority plans. The focus of these reports is on examining port authority performance vis-à-vis the immediate environs, stakeholders and the social and environmental management component that was not receiving enough attention. Sustainability reports seek to provide a diagnostic snapshot of the institution, its strategies and its performance in the four dimensions of sustainability. They require the port authorities to explain how their management and operations are generating value for port stakeholders.²² They lay out a set of indicators

¹⁷ Acción RSE, Guía práctica para la elaboración de Reportes de Sustentabilidad, June 2007.

¹⁸ CONAMA 7, Sustainable Development Summit, Port Sustainability, Working Group 23, November 2004.

¹⁹ Fernando González Laxe, Andrés Guerra Sierra, Federico Martín Palmero, Juan José Nóvoa Gómez, Carlos Otero Couto and Jorge Penela Núñez, Medición de la sostenibilidad en el Sistema Portuario Español: Propuesta metodológica a través de indicadores sintéticos de desarrollo sostenible, WORLD ECONOMY MEETING XII, Santiago de Compostela, May 2010.

²⁰ Law 33/2010, article three.

²¹ Puertos del Estado, Propuesta de metodología para la elaboración de memorias de sostenibilidad de las autoridades portuarias, Madrid, April 2011.

²² Port authority stakeholders are understood to be the individuals, social groups, companies and institutions that are impacted by port operations and can in turn influence the attainment and maintenance of the port's objectives.

defined in keeping with GRI guidelines,²³ designed to provide an objective picture of a port authority's relations with its environs in all four dimensions.

The resulting sustainability reports therefore use performance indicators to show the outcomes from adopting and applying management codes of practice, policies and systems. These indicators measure the institutional, economic, environmental and social impacts caused by the organization. They seek to describe and report on the pressures exerted on each of these dimensions, the measures taken to respond to them, and progress made or results obtained.

III. Conclusions

Sustainability is still not high on the agenda for national port agencies and authorities in the region. However, internal drivers such as ensuring commercial sustainability and development have led some of the region's port sector companies and operators to adopt port sustainability principles. The environmental, social, economic and, to a lesser extent, institutional dimensions are still emerging as components of the development strategies being mapped by some local port authorities, private operators and port companies. In any event, the institutional dimension of development strategies is the one receiving the least recognition and attention. It is to be hoped that all four dimensions of sustainable development will become a priority for port authorities and companies and a key component of strategic management at each port.

The pressure to address sustainable development will increase until it becomes standard practice for trade, transport and ports. Well-designed and managed port sustainability enhances the ability to meet the development objectives of any city and region that hosts a port. The most effective management methods for successfully addressing port sustainability require new approaches, such as collaboration and communication among actors. Using port sustainability policies to address the challenges facing the region's ports calls for making change a priority. The areas where city and port meet are in transition, and they are the focus of new strategies being adopted by city and port authorities alike where there is often no fluid dialogue —much less coordinated action. But public policy and institutional development can gradually encourage both dialogue and cooperation among stakeholders. Sustainable port development in the future hinges on involving all of these institutions in the decision-making process, by means of dialogue and transparency. The goal should be to include and involve socioeconomic actors and the population at large.

Ports are so important for the economy, local communities, the environment and the host city that any port policy seeking to promote sustainable development must be systemic. Such an approach requires the participation of the public and private actors that play an active role in port systems, as well as of the beneficiaries of sustainable development, such as the public sector, workers' organizations and the community.

²³ Global Reporting Initiative, see <http://www.globalreporting.org/Home>.