Most of the environmental factors have some effect on sound propagation outdoors. Many of these factors can be properly integrated into a sound propagation model. However, it is not easy to handle sound scattering caused by turbulence, while turbulence itself is the most important source of uncertainty.

Concurrently with the studies of turbulence models we have developed a concept to estimate excess attenuation using a state-of-the-art physical model and to evaluate uncertainty using a statistical model. This statistical model is based on two years’ continuous measurements using extensive acoustical and meteorological measurement facilities and producing over 100 factors hourly. Many meteorological factors showed strong and significant correlation not only with the excess attenuation but also with one another. To prevent the collinearity from resulting in an unstable model, many factors were abandoned. In the full version of the paper, the criterion and methods for selecting the best explanatory factors and forming this statistical model are considered. The full version of the paper will be published after the Acoustics Conference 2008 in June/July in Paris.

News from the sub-projects:

EFFORTS sub-project 2 WP 2.4. Noise annoyance of ports: Criterion to select meteorological factors to evaluate uncertainties in sound propagation (Abstract of conference paper)

By P. Majala

Most of the environmental factors have some effect on sound propagation outdoors. Many of these factors can be properly integrated into a sound propagation model. However, it is not easy to handle sound scattering caused by turbulence, while turbulence itself is the most important source of uncertainty.

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In every issue of the EFFORTS newsletter we present one of the leading people in the project. This time we present Humberto Moyano, the leader of the sub-project 3 “Port Organisation”

Humberto Moyano is an industrial engineer and is now the head of the Port Knowledge Management Department of the Port Authority of Gijón in northern Spain.

He studied industrial engineering at the Santa María University of Valparaíso in Chile and holds a MBA from the Santiago University in Vigo and a degree in Projects and Technology Management from the Oviedo University in Asturias.

In his career to date he has worked as marketing manager at PHB WESEHUTTE S.A. in industrial engineering in Gijón, and later as European R&D projects manager at ENYCA Engineering, Santander in Spain. Since 2001 he has held his current post as head of the department of Port Knowledge Management in the Port Authority of Gijón. There he has been responsible for participation in more than 42 European logistics, port and maritime transport R&D projects from FP-3 to FP-7 as well as other programmes such as INTERREG, GMES and TEN-Transport.

His current interests are EU policies, international policy, cosmology, astronomy and science in general. His motivation for and expectations from participating in the EFFORTS project are support for the expansion project of the Port of Gijón, with an investment portfolio of €3.3 billion between 2005 – 2010, which will double the port size and services. EFFORTS is one component in a long-term strategy from 2002-2020 based on the expansion project.2002-2020, based on the expansion project.
Current state of the sub-project 3: Port organisation

One can summarise the current developments on the SP3 by analysing the state of play in each WP.

State of play in the Port Processes WP

Work package 3.1 in EFFORTS focuses on improvements to port operational processes. Improvements will be implemented through new electronic tools for better coordination between the actors in the port and improved planning of resources and goods. To maximise the impact of these tools, a detailed analysis of existing and future port processes is a central part of the work package. The analysis aims at identifying the processes that have the best potential for improvement and also to document how the improvements can be made. By the end of 2007, the process mapping was almost complete and was planned to publish the results in early February. These results are already being picked up by other tasks in WP3.1 and have been used to start the work on designing the new coordination and optimisation tools. The process mapping is also being used in other work packages in EFFORTS to ensure that the integration aspects of the overall project are taken care of. A common process model is one prerequisite for a holistic approach to port operations improvements.

Work Package 3.1 has also met with other EU projects, most notably marNIS (see www.marnis.org), to harmonise our process maps with similar maps developed for other shipping domains, e.g. for port state control and supervision and for commercial shipping.

State of play in the Risk Management Framework WP

EFFORTS WP 3.2 aims at providing a generic methodology that introduces the issue in all its breath and complexity in a systematic way, with simple, practical and well understood terms. Such a generic methodology could subsequently be used by the ports to focus on individual cases and priorities without losing the overall general context. For this reason, it was decided to proceed by carefully selecting a list of generic hazards, each associated with a rough probability of occurrence, and map them to the generic port processes provided by WP 3.1.

The following categories of risk are considered in relation to safety in port operations:

- Physical: risk to life or health
- Economical: risk to property, assets or income
- Environmental: risk to the environment

The following classes of port actors are considered, subjects of the above hazards or threats:

- Shareholder: any physical person or group of persons (i.e. company, entity, trade category, etc.) who have professional activities directly linked to the port
- User: any physical person or group of persons who are beneficiaries of port services (passengers, traders, public)
- Stakeholder: any entity having indirect involvement in the port activities, including regulators, residents, etc.
EFFORTS sub-project 3: Port Organisation

By Leticia García García, Port of Gijon

The risk assessment and management methodology for port base on FSA (Formal Safety Assessment), as recommended by IMO, will be applied here. Recommendations for standardisation of port risk assessment and management are to be provided as the end result of this WP.

Future Developments in port organisation

There is still a lot of work to be done in Port Processes WP to understand the port and its terminal processes. The most important developments should be:

- Completion of port-process optimisation system development
- Pilot installation deployment and test completion

These results will facilitate rapid implementation of high-quality interoperability solutions between partners within ports. The organisation of the project foresees that these outcomes should then be taken into the Risk Management Framework WP. Major outcomes should be:

- Risk assessment and management
- Platform of tools and case study

The expected result at the end of SP3 will be to make the complex port structure transparent and provide the software tools to support specified operations. Furthermore, it will not only increase safety and security but also clarify the port context within the framework of a global economy.

Figure 2: Hazard Identification is based in a citizen centred framework, when any human actor can be considered at the centre of a set of values that can be perceived in a different way.

The Observatory

By Mick Sheehan, Port of Dublin

In its present guise, the Observatory (part of WP III) is essentially an educational and training software tool developed by the Port of Livorno. It is an organic database describing relevant training needs to all actors in the port in a timely and concise manner.

For example, in its simplest form it will show up required health and safety training for every employee, and both company and employee will be informed of any shortfall. It also introduces the concept of a Skills Passport. This notion presupposes that to work in the port area one must have a certain level of training, for example in basic health and safety. On achievement of that level, one will be issued with a certificate or stamp in one’s Skills Passport allowing one to work within the port estate. To work at a higher level, for example in port management, one would obviously need a whole new set of skills and a new level of certification in one’s Skills Passport. However, as part of EFFORTS WP III, the Observatory is currently undergoing a major overhaul in terms both of software changes and business focus in order to adapt it to the broader European port context. A demo of the new version is expected to be available in the coming weeks and will be announced in one of the next newsletters.
Get deeper insight to the sub-projects of EFFORTS

By Jan Prahm, TuTech Innovation GmbH

In my role as leader of dissemination activities I plan to visit the sub-project leaders of EFFORTS. This means I will visit the Port of Dublin for SP 1 „Navigation in Ports”, the Port of Le Havre for SP 2 „Ports and Environment” and the Port of Gijón for SP 3 „Port Organisation”.

Better communication

The aim of this tour is to get a deeper insight into the project activities in order to facilitate reports about the most relevant results, proceedings and events of EFFORTS and to improve internal project communication. In turn, this should facilitate effective communication with external observers of the project. Without a sound knowledge of the proceedings in the project, a sound dissemination is impossible. Dissemination of the successful work of a project such as EFFORTS to its stakeholders, for example the European Commission, is crucial for all project partners. It is important for the assessment of the project by the external observers as well as for the future exploitation of project results. Good communication is vital to earning the merits that good research means.

Climate friendly travel

As this project concerns ports and ships and in an attempt to be climate friendly, I will travel mostly by ship and rail, with one leg by plane. Arriving or leaving a port by ship also means that a much better understanding of the issues at stake can be gained, with the opportunity to see port operations such as berthing or mooring in action. It also offers the possibility of talking to the operating personnel who are the research subjects of some of the work packages. Although it is not an explicit topic in the EFFORTS project, climate protection is an issue on everyone’s agenda these days. People like us in the European research project business travel a good deal and we cause quite a lot of CO2 emissions in the process. On top of that, we are busy with transport research and so are the ones Europe looks to for solutions when it comes to more climate friendly transport. Travelling by rail and ship is a small experiment, and part of the intention is to encourage us to think about the way we work and travel. After all, CO2 reduction will almost certainly play an increasing role in future calls of the FP 7.

Coverage by EFFORTS blog

My tour starts on 17 February 2008 and I return to Hamburg on 26 February. During this time, I will cover the trip in a blog on the EFFORTS website. I will report “live” on the information I gather from the sub-project leaders and ports I visit. The reports will connect these people and places to the project and, I hope, will support the cohesion of the project partners. Such live reports should make the project more palpable because they put faces and names to the abstract contents of the work packages. The blog will be online under the link http://effortstour.tec-hh.net

Events

On 29 February 2008 the second NoMEPorts Conference will take place in Amsterdam. During this conference the Good Practice Guide on Port Industrial Noise will be launched.

The 2nd NoMEPorts Conference will focus on Noise Management in European Ports in practice by means of workshop sessions. This one-day conference will follow a two-day conference on environmental policy and best practice organised by GreenPort and EcoPorts Foundation.


• 20-26 February 2008 - GreenPort Study Tour, Amsterdam, Netherlands
• 27-28 February 2008 - GreenPort / EcoPorts 2008, Amsterdam, Netherlands

ATTENTION: CHANGED DATE
• 24-25 April 2008 - NoMEPorts, Amsterdam, Netherlands

Further Events

• 18-20 March 2008 - TOC Asia 2008 Conference, Shanghai, China
• 7-8 April 2008 - City Connect - „Where Transport Meets Trade”, Chongqing, China
• 15-17 April 2008 - Intermodal South America 2008, Sao Paulo, Brazil
• 20-23 April 2008 - Navis World 2008, San Francisco, USA
• 21-25 April 2008 - European Road Transport Research Arena TRA 2008, Ljubljana, Slovenia
• 22-24 April 2008 - Multimodal 2008, Birmingham, United Kingdom
• 20-22 May 2008 - RORO 2008, Gothenburg, Sweden
• 4-6 June 2008 - Danube Summit Conference and Exhibition, Constanta, Romania
• 17-19 June 2008 - transport logistic China, Shanghai, China
• 25-26 June 2008 - TranSec World Expo, Amsterdam, Netherlands
• 18-19 September 2008 - International Symposium on Ship Operations, Management & Economics, Athens, Greece
Efforts ports

The Port of Le Havre on the go

In every EFFORTS Newsletter we present a short description of one of the participating ports. This time we present the Port of Le Havre. With global traffic of nearly 80 million tonnes in 2007 (+6.6% compared to 2006), Le Havre is the fifth largest port in Europe in tonnage terms and the leading French port whether for foreign trade or for containerised traffic, with 2.64 million TEU in 2007 (more than 60% of the containers handled in French ports).

As a general-purpose commercial Port, Le Havre processes:
- liquid bulk, 40% of the crude oil supply for France (the raw material constitutes almost half of the total tonnage transiting through the port) is unloaded each year at Le Havre terminals
- solid bulk, coal, cement, animal feedstuffs etc.
- general cargo, including containers, ro-ro freight and conventional cargo.
- passengers who cross the English Channel to England or on international cruises.

Remarkable shipping and sea access location complemented by congestion-free overland connections

Located two hours by road from Paris, the Port of Le Havre is the first major port in the north west of continental Europe on the English Channel/North Sea shipping corridor – through which a quarter of the world sea trade transits every year. Owing to this exceptional geographical location, the Port of Le Havre is usually included in the round trips of the main vessels of regular shipping lines, as the first European port for imports or the last one for exports. Thus, it offers the best transit times for intercontinental trade. As a deep-water sea port, Le Havre can accommodate the largest vessels (9 000 TEU or more containerships, oil tankers up to 500 000 dwt). Accessible around the clock, seven days a week and all year round, the Port of Le Havre offers congestion-free inland connections throughout Western Europe, by road, rail, waterway, feeder/short sea. Development of new facilities for containers

Development of new facilities for containers

Since 2000, containerised traffic has seen an annual growth of almost 10%, i.e. twice the increase in total sea traffic. Compared to 2006, the number of containers handled rose by 23.4% in 2007 to 2.64 million TEU. These very good results are partly due to the opening of a new facility dedicated to containers “Port 2000”, a public and private investment of more than €1 billion. Port 2000 will in the long term comprise quay berths with an overall length of 4.2 kilometres. The first phase entered service in 2006. The second construction phase (over a length of 2.1 km) has just been launched to meet the shipping lines’ requirements. Work started in the second half of 2007. Thanks to this new competitive infrastructure, the Port of Le Havre aims to reach 6 million TEU traffic.

A real commitment to sustainable development

With nearly €46 million dedicated to environmental measures, Port 2000 fits in with a real sustainable development policy in the river Seine estuary in close cooperation with the relevant actors. Half the budget is allocated to a vast programme of restoration of the mudflats, a favourable place for the development of organisms which contribute to the food chain of numerous species. Other measures consist of creating new rest places for birds, as the objective is to favour bio-diversity in the Seine Estuary. Well beyond the environmental aspect of Port 2000, sustainable development forms part of the daily objectives of the Port of Le Havre Authority both through the completion of impact studies and the environmental support of port projects and also via the awareness actions carried out by the port of Le Havre.

A long-term development scheme

The study of prospects for the main trade channels (fuels, containers, logistics, etc.) which are likely to determine the structure and size of the port of Le Havre in the long term made it possible to define a master plan for the years 2020-2030. The subsequent space development makes it possible to anticipate and prepare the development operations which will provide better efficiency and fluidity in the port system.