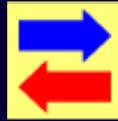




SCHOOL OF NAVAL
ARCHITECTURE &
MARINE ENGINEERING

LABORATORY FOR MARITIME TRANSPORT
NEWSLETTER No 15
October – December 2010



<http://www.martrans.org>



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Dear Reader,

The electronic newsletter of the Laboratory for Maritime Transport (LMT) of NTUA is issued regularly to inform you regarding our current and forthcoming activities. You are warmly encouraged to visit our website (www.martrans.org) for further information and to contact us about your enquiries. Your feedback will be highly valued. Kind regards..._

The LMT staff

**LMT WINS LLOYDS
LIST AWARD for
Achievement in Safety
or Environmental
Protection**



LMT has won the "Award for Achievement in Safety or Environmental Protection" at the 2010 Lloyd's List Greek Shipping Awards. This award is given to any Greek individual, crew, company or organisation whose act, initiative or product has contributed to either safety or protecting the environment, or both.

The award was received by the Director of LMT, Professor Harilaos N. Psarafitis on Friday December 10, 2008, at the seventh anniversary of the Greek Shipping Awards. Close to 1,000 people attended the annual presentation dinner at the Athenaeum Intercontinental Hotel in Athens that paid tribute to the world's largest shipowning community, their service partners and some of the industry's outstanding achievements during the preceding year. The Greek government was represented by the Minister of Maritime Affairs, Island Policy and Fisheries Mr. Ioannis Diamantidis.

Other award categories this year included the Dry Cargo Company of the Year, the Tanker Company of the Year, the Passenger Line of the Year, the Shipbroker of the Year, the Shipping Financier of the Year, the Technical Achievement Award, the International Personality of the Year, the Ship of the Year, the Award for Achievement in Education or Training, the Piraeus International Centre Award, the Seafarer of the Year, the Greek Shipping Newsmaker of the Year, the Lloyd's List / Propeller Club Lifetime Achievement Award, and the Greek Shipping Newsmaker of the Year.

It is reminded that LMT had won the "Piraeus International Centre Award" at the 2008 Greek Shipping Awards.

Safety & environmental protection figure prominently within the roster of LMT R&D over the years, with (among others) EU projects such as ATOMOS I-IV, Safeco I-II, Disc I-II,

Themes, EU-MOP (LMT coordinator), OSH and Flagship, or Greek projects such as the AEGEAN. More recently, LMT has been engaged in several R&D projects on ship air emissions, sponsored by the Hellenic Chamber of Shipping (HCS), by ABS, by DNV and by The Lloyds Register Educational Trust (Centre of Excellence in Ship Total Ship Energy – Emissions – Economy). LMT is the coordinator of EU project SuperGreen (22 partners, 13 European countries) to assist the European Commission on their Freight Transport Logistics Action Plan on "green corridor" issues. Moreover, LMT is centrally active at the IMO, both at the Maritime Safety Committee (MSC) and at the Marine Environment Protection Committee (MEPC).



Professor Harilaos Psarafitis receiving the award from David Moorhouse, CBE, chairman of the board of directors and chairman of sponsor, Lloyd's Register Group.

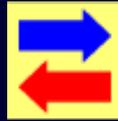
At MSC, Prof. Psarafitis is a member of the expert group on Formal Safety Assessment. At MEPC, he chaired since 2007 a correspondence group on environmental risk evaluation criteria (oil pollution), chaired a working group on the same subject at MEPC 60, and (recently) has been a member of the expert group on Market Based Measures for Green House Gases. He has been advising the Hellenic Chamber of Shipping and the Union of Greek Shipowners on these matters.

LMT offers several courses at NTUA that bring the above and other experiences into the classroom, namely "Economics of Maritime Transport III: Safety & Environment," "Management and Study of Risk in Maritime Transport" and "Human Element – Introduction in Human Reliability in Maritime Transport."



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SuperGreen project news

SuperGreen



First regional workshop held in Naples

The first regional SuperGreen project workshop took place at Interporto Campano in Nola, just outside Naples, Italy on October 19, 2010. The workshop was the first in a series of regional workshops associated with the project benchmarking task and it attracted around 100 participants. The workshop entailed an overview of the project progress, including the selection of pilot corridors and the initial set of Key Performance Indicators (KPIs) that will be used for benchmarking the selected corridors and a consultation session with the stakeholders present. Despite its complexity, the concept of green corridors was welcomed and the potential of the SuperGreen project was recognized by stakeholders.



The audience of the workshop consisted of logistics service providers, shippers, carriers in all surface modes, intermodal terminals and transport companies, policy makers, researchers, environmental organizations and other stakeholders interested in green logistics.

As one of the most important events at the workshop, the consultation session with stakeholders was carried out in two groups: in Italian and English-speaking groups. The discussion was focused on the benchmarking methodology and selection of the Key Performance Indicators. The

outcome of discussions in the consultation sessions can be summarized as follows:

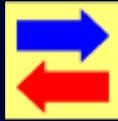
- The overall concept was warmly welcomed and there was a feeling that pilot cases can probably help to better understand the scope of the project. In fact, this will be accomplished in subsequent phases of the project and presented in future events.
- The proposed methodology for benchmarking was in principle accepted as complete. However, it was recommended to leave the weighting task of the KPIs out of the benchmarking exercise. This was justified with the fact that different stakeholders have different approaches and criteria towards the proposed KPIs (for instance, some participants said that only two KPIs count, cost and service).
- One of the groups highlighted the need for identifying the specific end-users of the KPIs and the benchmarking methodology as it was not clear for whom the project aims to develop the benchmarking methodology.
- The general impression was that the presented KPIs are thoroughly studied but a further selection of the KPIs should be carried out in order to ensure full operability. Many participants said that an operational example of how the KPIs will be used should be developed as a matter of priority.
- Stakeholders expressed their opinion on the evaluation of the free access to the infrastructure and found that the project should not look at it at this stage. The general opinion was that it is a precondition which is already regulated at the EU level and must be applied by the Member States.





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In addition to the input from the discussion, stakeholders made their contribution in writing by filling in questionnaires on the selection of the KPIs and the development of the methodology for benchmarking.

The event closed with a panel discussion where experts from the logistics industry gave their opinion on the project and the concept of green corridors. During the panel discussion several problems in Italian logistics emerged which were first considered to be regional but, as concluded at the end, are likely common to the whole of the European Union.

Advisory Committee meeting held in Brussels



The Advisory Committee (AC) of the SuperGreen project met with the Project Coordinator and some other partners of the project on October 26, 2010 at the premises of partner Procter and Gamble in Brussels.

Much of the discussion focused on feedback received on the document on KPIs previously distributed to the AC. A document compiling the responses of the AC was prepared and distributed to the AC before the meeting.

The general consensus from the AC was that the KPI methodology was in broad terms acceptable and that the KPIs proposed by the project cover all basic facets of the problem. However, there was also a general sense that KPIs as proposed are too ambitious and there is a need to simplify so that the set be useful. In that sense, reducing the set of KPIs to a more manageable set was considered as a desirable outcome.

The general sense of the majority of the group was that choosing which KPIs to keep will be determined on a case by case basis, depending on what data is available for each corridor under consideration. Most agreed that by the end of the project we should have a balanced set of KPIs, to the extent possible.

Last but not least, possible links with the policy-making process in Brussels as regards the Freight Transport Logistics Action plan, the TEN-T's (core network) and the transport white paper should be explored, even though the project's timetable is not necessarily compatible with that of the Commission.

Second regional workshop to be held in Antwerp on Feb. 1, 2011



The second regional workshop of the project will be hosted by the port of Antwerp on Feb. 1, 2011 and will focus on policy. To that effect, changes in the operational and regulatory environment will be surveyed and grouped. The target is to analyse and group the complex amount of information so that it will be useful to forthcoming phases of the project. The method will be a survey based on research works and other existing information. The information will be collected under a few main groups: technology development, international regulations, trends in logistics, changes in business environment, public policies, infrastructure development, etc. The target is to find the general and specific changes in the corridor's operational and regulatory environment which may hinder improvements of green logistics corridors. Assessment of the effects will be made using the key performance indicators (KPIs) that will be used for benchmarking the corridors selected for analysis.

To look at the program of the workshop and register for it, please go to this link:

<http://www.supergreenproject.eu/awsantwerp2011.html>

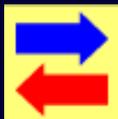
Pre-registration deadline for this event is 20 Jan. 2011.

Forthcoming regional workshops: Malmoe, Sweden, 10 March, 2011 and Sines, Portugal, March 24, 2011.



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1st EcoTransIT Stakeholder Workshop in Paris

On 5th of October the 1st EcoTransIT Stakeholder Workshop took place in Paris. More than 100 participants representing the whole transport sector - logistics companies, shippers, forwarders, air, ocean and land carriers, scientific and non-governmental organisations - attended the meeting. They actively shared the discussion on needs and benefits of a reliable and easy-to-use carbon calculator for global supply chains.



George Panagakos of LMT had the opportunity to present the SuperGreen project and discuss synergies with the EcoTransIT World tool.

All key performance indicators of the 'Environmental sustainability' group of SuperGreen indicators (CO₂-eq, NO_x, SO_x, PM₁₀) concerning a specific transport chain are calculated by EcoTransIT World. The three basic determinants of transport emissions (fuel emission factor, specific energy consumption and load factor) are followed by the model, and are entered in the calculations either directly by the user or as default values based on real life experiences. Of particular importance to SuperGreen are the default values of EcoTransIT World, as it is expected that for some of the transport chains examined under the project, the necessary data for emission calculations will not become available.

“Market Based Measures for Greenhouse Gases: The IMO Debate” Technical Meeting Report by Petros Lalangas

On December 16 the third SNAME Greek Section technical meeting for the 2010-2011 season took place in the hospitable premises of Maran Tankers in Athens. In the presence of some forty members, Harilaos Psaraftis, Professor at the School of Naval Architecture and Marine Engineering and Director of the Laboratory for Maritime Transport at the National Technical University of Athens, presented the subject topic.

The author stated that the 60th session of IMO's Marine Environment Protection Committee (MEPC 60) last March decided to undertake a feasibility study and impact assessment of all the market-based measure proposals submitted in accordance with the work plan for further consideration of market based measures (MBMs).



Author H. Psaraftis is receiving a silver & bronze paper weight remembrance gift from P. Lalangas, Chair, with the SNAME/Greek Section logo & name engraved on it

In order to fulfill the above, MEPC 60 requested the Secretary-General of IMO to establish an Expert Group on Feasibility Study and Impact Assessment of possible Market-based Measures. The author was nominated as member to this group by the Greek Maritime Administration. The scope of the Expert Group was to evaluate the various proposals on possible MBMs with the aim to assessing the extent to which they could assist in reducing GHG emissions from international shipping, giving priority to the maritime sectors of developing countries, least developed countries (LDC) and small islands developing states (SIDS).

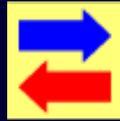
The Expert Group after three meetings and various deliberations, submitted a 300+ page report to MEPC 61 (Sep. - Oct. 2010). A total of ten (10) MBM proposals were submitted by various countries and other organizations which were evaluated according to nine (9) criteria. The author presented the 10 MBM proposals and the key findings of the Expert Group, as well as the author's own position on the subject.

The presentation included as well a lot of useful data and charts about the green house gases of various transportation modes. More details can be found in the full PP presentation



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of this meeting which has been uploaded on the Greek Section's web site.

After the end of the presentation and the discussions, a reception took place in an adjacent hall, where we all enjoyed and welcomed the holiday season with some delicious Greek holiday treats, such as kourabiedes and melomakarona with Christmas decorations.

Meetings and Events

attended by LMT staff

- 2nd Mare Forum "Iron Ore and Coal" World Shipping Summit, Athens, Greece, Oct. 4
- 1st EcoTransIT Stakeholder Workshop, Paris, France, Oct. 5
- 3rd International Symposium on Ship Operations, Management and Economics (SOME), SNAME Greek Section, Athens, Greece, Oct. 7-8
- SuperGreen 1st regional workshop, Naples, Italy, Oct. 18
- SuperGreen 3rd PMC meeting, Naples, Italy, Oct. 20
- SuperGreen Advisory Committee meeting, Brussels, Belgium, Oct. 26
- "The Historical Evolution of Greek Shipping" seminar, University of Piraeus, Greece, Nov. 2
- SNAME Annual Meeting 2010, Bellevue/Seattle, Washington, USA, Nov. 3-5
- Intelligent ICT and Green Logistics (ECITL) Conference, Bremen, Germany, Nov. 4-5
- 5th Panhellenic Conference of Harbor Works, Athens, Greece, Nov. 22-25
- International Meeting on Port Integration, IV C programme, Civitas-Catalyst initiative, Ancona, Italy, Nov. 23-24
- Lloyds List Greek Shipping Awards, Athens, Greece, Dec. 10
- SNAME Greek section technical meeting, Dec. 16

Papers, presentations and speeches

published / presented by LMT staff

- Gkonis, K.G. and H.N. Psaraftis (2010), "Container transportation as an Interdependent Security problem", *Journal of Transportation Security*, 3:197-211.

- Gratsos, G.A., H.N. Psaraftis, P. Zachariadis, "Life-cycle CO2 emissions of bulk carriers: A Comparative Study", *Trans RINA*, Vol 152, Part A3, *International Journal of Maritime Engineering*, Jul-Sep 2010, pp. A 119-A 134.
- Hatzinikolaou, S., N. Ventikos, H. N. Psaraftis, D. Lyridis, "Multi-criteria methodology for port infrastructure location: application to the new commercial port of Kos" (in Greek), 5th Panhellenic Conference of Harbor Works, Athens, Greece, 22-25 Nov. 2010.
- Kontovas, C.A., H. N. Psaraftis, "Carbon Dioxide Emissions Valuation and its Uses", 3rd International Symposium on Ship Operations, Management and Economics (SOME), SNAME Greek Section, Athens, Greece, 7-8 Oct. 2010.
- Lindstad, H., O. T. Morkve, H. N. Psaraftis, "Establishment of a system to compare Energy Usage and Emissions for all transport modes", 3rd International Symposium on Ship Operations, Management and Economics (SOME), SNAME Greek Section, Athens, Greece, 7-8 Oct. 2010.
- Oikonomou K., Ventikos N.P. (2010), "Study of F/X Accidents in the Global Fleet: Analysis, Results and Risk Elements", *Proceedings of the Annual Meeting of the Hellenic Institute of Marine Technology*, Piraeus, Greece, pp. 151-161.
- Psaraftis, H.N., "Can any of the emissions reduction measures work?" 2nd Mare Forum "Iron Ore and Coal" World Shipping Summit, Athens, Greece, 4 Oct. 2010
- Psaraftis, H.N., "Market Based Measures for Greenhouse Gases: The IMO Debate", SNAME Greek section technical meeting, 16 Dec. 2010.
- Psaraftis, H.N., Autumn topics - Fthinoporina (in Greek), *Naftika Chronika*, Oct. 2010.
- Psaraftis, H.N., Kontovas, C.A. (2010), "Balancing the economic and environmental performance of maritime transportation", *Transportation Research D* 15, 458-462.
- Solomonidis, C., H. N. Psaraftis, G. Papageorgiou, A. Rogan, A. Toumazis, A. Boutatis, "The Cypriot port of Vassiliko Master Plan" (in Greek), 5th Panhellenic Conference of Harbor Works, Athens, Greece, 22-25 Nov. 2010.
- Ventikos N.P., Louzis K., Koimtzoglou A. (2010), "Shipwrecks vs. Environment in Greek Waters: Code Red or Fuzzy Alarm?", *Proceedings of the SRA 2010 Annual Meeting*, Salt Lake City, Utah.