



2023 Master internship at University of Gdańsk



TITLE : The concept of sustainable seaport development

LAB & PEOPLE

- Name of the hosting lab: Division of Maritime Economy
- General activities of the lab: The Department of Maritime Economy conducts research and teaching in the field of the functioning and development of seaports, shipping, land-sea transport chains (including the development of intermodal transport), protection of the marine environment, competitiveness and innovation of Polish maritime transport.
- Website: <http://ekonom.ug.edu.pl/web/zhm/index.html?lang=pl>
- Number of staff / PhD: 5 researchers
- Supervisor name and contact: Małgorzata Bielenia researcher (malgorzata.bielenia@ug.edu.pl); Ernest Czermanski researcher (ernest.czermanski@ug.edu.pl)

TOPIC OF THE INTERNSHIP

- Scientific context of the internship (max 20 lines)

The implementation of the sustainable development strategy boils down to three areas: social solidarity, economic effectiveness and environmental responsibility. The activities of the sustainable port in the environmental field can be classified as the following activities: water testing, sediment testing, noise level, air pollution, waste, and fighting threats.

Keywords : port sustainability development

Bibliography :

Acciaro M., Ghiara H., Inés Cusano M., Energy management in seaports: A new role for port authorities. "Energy Policy", 2014, 71: 4-12.

Azarkamand S., Ferrer G., Darbara M. R., Calculating the carbon footprint by using a standardized tool, Science of The Total Environment, Volume 734, 2020, 139407, ISSN 0048-9697, <https://doi.org/10.1016/j.scitotenv.2020.139407>. (<https://www.sciencedirect.com/science/article/pii/S0048969720329247>)

Badurina P., Cukrov M., Dundović Č., Contribution to the implementation of "Green Port" concept in Croatian seaports, "Scientific Journal of Maritime Research" 31 (2017): 10-17.

Bergqvist R., Egels-Zandén N., Green port dues - The case of hinterland transport, "Research in Transportation Business and Management", 2012, 5: 85-91.

Bergqvist R., Macharis C., Meers D., Woxenius J., Making hinterland transport more sustainable a multi actor multi criteria analysis, "Research in Transportation Business and Management", 2015, 14: 80-89.

Bergqvist R., Monios J., Green Ports: Inland and Seaside Sustainable Transportation Strategies, Elsevier, 2019.

Bergqvist, R.,: Monios, Jason., Green Ports in Theory and Practice. 2019, 10.1016/B978-0-12-814054-3.00001-3. <https://doi.org/10.1016/B978-0-12-814054-3.00001-3> pp.

Braathen N.A. (Ed.), Environmental Impacts of International Shipping: The Role of Ports (OECD, 2011).

Czermański, E, Morska żegluga kontenerowa a zrównoważony rozwój transportu, Wydawnictwo Instytutu i Transportu Morskiego Uniwersytetu Gdańskiego, Polska, Gdańsk, 2019, pp. 55-58.

Digital 2022 July Global Statshot Report , <https://wearesocial.com/us/blog/2022/07/the-global-state-of-digital-in-july-2022/>, pp. 9, 19.

Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure, OJ L 307/1.

EMTER - facts and figures [PL]. Available online: <https://www.eea.europa.eu/publications/maritime-transport/emter-facts-and-figures/emter-facts-and-figures-pl.pdf/view> (Accessed 17 September 2022).

Environmental Impacts of International Shipping: A Case Study of the Port of Vancouver, OECD Publishing, Paris, France 2009.

European Maritime Transport Environmental Report 2021. Available online: <https://www.eea.europa.eu/publications/maritime-transport/> (Accessed 17 September 2022).

Fabisiak J., Zagrożenia ekologiczne Bałtyku związane z zanieczyszczeniami chemicznymi – węglowodory, Scientific Journals of the of Naval Academy i Gdynia, year XLIX, No. 3(174)/2008: 15.

Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard. Available online: <https://ghgprotocol.org/corporate-standard> (Accessed 10 September 2022).

https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

<https://intermodalnews.pl/2022/02/02/co-porty-moga-zrobic-na-rzecz-ochrony-klimatu/>

<https://pro.similarweb.com/#/digitalsuite/home> (Accessed 23 September 2022).

<https://quantis-suite.com/Scope-3-Evaluator/>

<https://sdgs.un.org/>

<https://www.europarl.europa.eu/news/en/headlines/society/20180703ST007129/eu-responses-to-climate-change>

<https://www.europarl.europa.eu/news/pl/headlines/society/20190313ST031218/emisje-co2-z-samochodow-fakty-i-liczby-infografiki>

<https://www.websitecarbon.com/> (Accessed 23 September 2022).

Johansson L., Jalkanen J-P., Kukkonen J., Global assessment of shipping emissions in 2015 on a high spatial and temporal resolution, „Atmospheric Environment” Vol. 167 (2017)

Lam, J.S.L., Notteboom, T. The greening of ports: a comparison of port management tools used by leading ports in Asia and Europe. Transport Reviews 34 (2), 2014,

Miola A., Paccagnan V., Mannino I., Massarutto A., Perujo A., Turvani M., External costs of Transportation Case study: maritime transport, „Joint Research Centre Institute for Environment and Sustainability”, EC, 2009.

Moon D. S. H., Woo J. K., Kim T. G., Green Ports and Economic Opportunities,(In:) Corporate Social Responsibility in the Maritime Industry,WMU, ed. by L. L. Froholdt, Studies in Maritime Affairs 5, Springer International Publishing AG, part of Springer Nature 2018.

Ng, A.K.Y.,: Song, S., The environmental impacts of pollutants generated by routine shipping operations on ports. Ocean & Coastal Management 53, 2010, pp. 301-311.

Notteboom T., Delhaye E., Vanherle K., Analysis of the Consequences of Low Sulphur Fuel Requirements, Report commissioned by European Community Shipowners' Associations (ECSA), 2010. 1-83

Oniszczyk-Jastrzābek A., Pawłowska B., Czermański E., Polish sea ports and the Green Port concept, SHS Web of Conferences, Vol. 57/2018, <https://doi.org/10.1051/shsconf/20185701023>.

Our common future, (New York, NY: Oxford University Press, WCED, 1987)

Peris-Mora E., Diez Orejas J.M., Subirats A., Ibanez S., Alvarez P., Mar Pollut Bull, Vol. 50: 1649–1660 (2005).

Puig M., Wooldridge C., Michail A., Darbra R.M., Environ. Sci. Policy Vol. 48: 57–66 (2015).

Schippera, C.A., Vreugdenhila H., de Jonga M.P.C., A sustainability assessment of ports and port-city plans: Comparing ambitions with achievements, “Transportation Research” Part D 57 (2017) 84–111.

Sustainability Report 2017, (EcoPort, 2017)

<https://www.ecoport.com/publications/sustainability-report-2017>

The Leading Maritime Cities of the World 2022, A Menon Economics and DNV Publication.

Trozzi C., Vaccaro R., Environmental impact of port activities, [in:] C.A. Brebbia, J. Olivella (Eds.), Maritime Engineering and Ports II (WIT Press, Southampton, 2000).

UNESCAP, 2021. Smart port development policies in Asia and the Pacific., viewed 01 September 2022, Available online: https://www.unescap.org/sites/default/d8files/event-documents/SmartPortDevelopment_Feb2021.pdf (Accessed 1 Sep-tember 2022).

Vaishnav P., Fischbeck P. S., Morgan M., Granger Corbett J. J., Shore Power for Vessels Calling at U.S. Ports: Benefits and Costs, “Environmental Science and Technology”, 2016, 50 (3): 1102-1110.

Winkel R., Weddige U., Johnsen D., Hoen V., Papaefthimiou S., Shore Side Electricity in Europe: Potential and environmental benefits, “Energy Policy”, 2016, 88: 584-593.

Żukowska S. Concept of green seaports. Case study of the seaport in Gdynia, Prace Komisji Geografii Komunikacji PTG, 23(3), 2020

Tasks and duties entrusted to the student:

The student would first have to define the concept of a sustainable seaport. The next step is to gather recent information about sustainable practices occurring in the maritime sector and, in particular, in seaports. The point of view of port authorities and port terminal representatives will also be gathered, which will require field work (or a remote meeting), in order to explore specific measures to obtain data on both the ways in which greening - perceptions of the phenomenon (scope, resulting issues, regulations...). The second issue concerns the measurement of the sustainable seaport development in selected seaports, which also requires data gathering. The expected deliverables would be a datasheet for each studied seaport with all the above information, in order to give a clear overview of the local situation concerning sustainable development of the seaport.

Skills to be acquired or developed:

Expertise on sustainable seaport development ☐ Knowledge of legal policy seaports ☐ Comparative knowledge of maritime sector (especially seaports) ☐ English conducted interviews

PROFILE OF THE DESIRED STUDENT

- Minimum level of study required: Master
- Field(s) of study: social sciences (especially environmental, economics, law...)
- Scientific skills:
 - ☑ Interviewing methods and skills
 - ☑ Good writing and summarising skills
- Language skills required: English is a must in order to communicate with seaport authorities and to understand documents

THE INTERNSHIP ASSIGNMENT:

Desired duration of the internship (in months): 5 months

Desired Starting date of the mission: between 01/10/2023 and 01/05/2024

Indicative weekly schedule: 35h / week

Remuneration ?

Erasmus grant : could be asked to your own university

Internship agreement: *an internship agreement will be signed.*

To SEA-EU students:

If you're interested please send your CV and letter of motivation to the scientist in charge, email before the date / / 2023.