

The Toxic Ship: The Voyage of the Khian Sea and the Global Waste Trade. *By Simone M. Müller.* Seattle, WA: University of Washington Press, 2023. 266 pp. Paperback, \$30.00. ISBN: 978-0-295-75183-2.

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Reviewed by Clarence Hatton-Proulx

During the 1980s, North American cities underwent a waste crisis. Volumes of municipal solid waste exploded, environmental regulations toughened, NIMBYism in the exurbs flexed its muscles, and environmental justice movements flourished. Toxic waste became an international public problem, underlined by the multiple ships exporting toxic waste from the USA and looking for dumping grounds in developing countries under the watchful eyes of environmental organizations and the media. *The Toxic Ship*, a clearly and concisely written monograph, uses the case of the Khian Sea ship to tackle the globalization of hazardous waste, environmental justice, and environmental governance.

The Khian Sea left Philadelphia in 1986 with 15,000 tons of incinerator ash destined for the Bahamas, under a contract between the City of Philadelphia and subcontractors. The Bahamian government, after intending to use this waste as reclamation, denied it access. The ship then tried its luck in Haiti, where its ash was supposed to serve as fertilizer and was partly dumped in the port of Gonaïves until it was ordered to stop under pressure from activists. It traveled the world, attempted to unload in close to a dozen countries—under surveillance from Greenpeace, newspapers, and American state officials—switched names three times, and ended up illegally dumping its freight in the Atlantic and Indian oceans.

Simone M. Müller skillfully uses the Khian Sea to tackle wider topics of importance to environmental and business history. The ship fits into a wider history of urban waste elimination involving spatial and metabolic inequalities. Historically, Philadelphia has dumped more than 900 million gallons of sewage sludge, most contaminated with heavy metals, and municipal waste in the Atlantic Ocean, the Delaware, and the Schuylkill rivers. Most coastal American cities did as much until a 1980 Congress ban. After the city closed most of its landfills during the late 1970s, municipal waste was exported to landfills in Pennsylvania and New Jersey, alongside the city's incinerator ash, until this outlet was also restricted. The Khian Sea thus represents a metabolic extension, not a break, in urban waste externalization.

The Toxic Ship does a great job of setting the local stage that led to the Khian Sea fiasco. Philadelphia, in the second half of the twentieth century, was struck by deindustrialization and white flight, both eating away municipal revenue. Under severe fiscal constraint, the city cut jobs,

sold off municipal properties, and contracted loans to service debt, frustrating blue-collar unions and provoking strikes. In 1986, a garbage collector strike caused waste accumulation and nuisances that encouraged municipal officials to further export municipal waste outside city boundaries. Increasing costs of toxic waste disposal in landfills under mounting environmental regulation in the 1970s on American land led to business opportunities for shippers, who looked to profit from developing countries' lack of environmental law and enforcement.

The Khian Sea, such as the Mobro 4000 that went from New City to Belize and back loaded with waste, made for good but atypical stories. Its load was small, the toxicity of its waste debatable, and it was not representative of the waste exportation situation since, during the 1980s, the great majority of exported American waste was shipped to Canada. But it became a coveted news story because it tapped into narratives of chase and evasion, environmental racism, and conflicts between rich and poor nations, such as the USA and Haiti. In so doing, it played a role in globalizing and constructing the public problem of hazardous waste, linking it with struggles for environmental justice and environmental governance.

The Toxic Ship does not take the toxicity of waste at face value but looks to historicize it to understand its social construction. It rightfully shows that valuations of toxicity, pollution, and exposition are never static and vary in time and space. Thresholds do not exist in nature but are determined by power relations, instruments, and institutions. During the 1980s, most American experts did not consider incineration ash to be dangerous. But a toxicity valuation conflict opposed the Khian Sea's shipowner and Greenpeace, whose own analysis found much higher levels of dioxins in the ship's waste. The Environmental Protection Agency confusingly stepped in twice in the late 1980s, first saying that the ash could be dangerous if dumped in Panama, then deeming it to be nontoxic according to US norms.

The monograph is based on a diverse set of archives and illustrated with clear and pleasing maps, helping the reader follow the ship's convoluted journey around the world. It makes for a fascinating read that bridges urban history, environmental history, legal history, and business history. It is as much about the Khian Sea as it is on the history of the toxic waste trade, its transformation into a public problem through the scrutiny of environmentalists and state officials, and its tentative global governance supervised by the 1989 Basel convention, which the USA has yet to ratify. The book is exemplary global history in that it is also attentive to local context, such as in Gonaïves, and its interactions with wider trends. It demonstrates how Americans and other industrialized countries have partly exported their environmental

problems instead of changing their consumption habits and waste management, profiting from the patchwork nature of international waste disposal law and the business opportunity of exploiting environmental inequalities between rich and poor nations.

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Dr. Hatton-Proulx is inspired by environmental history and urban studies. His work currently focuses on waste incineration, energy transitions, brownfield remediation, and deindustrialization.

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Flemish Textile Workers in England, 1331–1400: Immigration, Integration and Economic Development. By *Milan Pajic*. Cambridge University Press, 2023. xvii + 368 pp. \$130 hardback. ISBN: 978-1-108-77421-5.

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Reviewed by Catherine Casson

The role of Flemish migrants in the development of the English textile industry has been debated by medieval historians. Particularly contested are the extent to which their actions accelerated existing developments, such as in fulling technology, or triggered change by introducing a new skill set better suited to finer cloth. Pajic's book makes a further contribution to those debates and extends our understanding of Flemish migration and its impact. The book has two stated aims: to examine how and why Flemings migrated to England and to consider their activities when they arrived. Pajic concludes that one of the most significant changes introduced by Flemish migrants was in the form of new business practices, notably the centralization of production.

The book focuses on a period when there was a pro-active policy by the English crown to encourage citizens of Flanders to relocate to England, beginning with Edward III's invitation of 1331 to Flemish textile works to settle in England, and ending with the aftermath of attacks against the Flemings in 1381. A combination of prosopographical and quantitative methodology is employed. Analysis is on the basis of three sets of records: firstly, civic court records from London, Colchester and Great Yarmouth; secondly, royal court records and customs and alnage accounts from England; and thirdly, charters from the archives of the count of Flanders. Supplementary sources are also used for prosopographical purposes, including the city accounts of Bruges and Ghent.