Global Trade in Waste Treatment and De-Pollution Services

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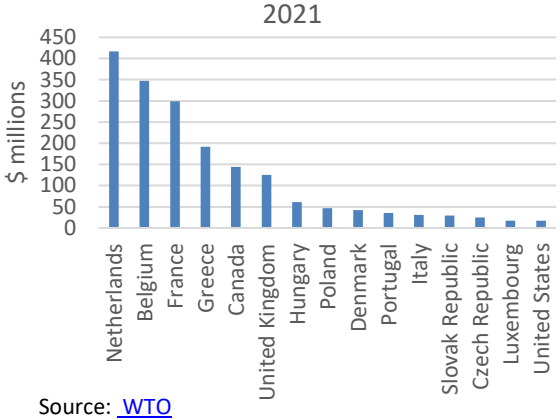
This EBOT examines recent trends in global waste treatment and de-pollution (WT&D) services trade. Available data suggest that global WT&D trade is small and has been relatively resilient, likely due to the essential nature of these services. Such trade is also characterized by substantial regional concentration, as the nature of many WT&D services favors provision by geographically proximate firms and local affiliates.

Discrete and comparable data on global trade in environmental services are extremely limited.[1] The WTO does publish limited data on trade in waste treatment and de-pollution (WT&D) services—an environmental services segment that includes waste treatment, remediation, sanitation, and other services to restore or clean the environment.[2] While these data are available for only 29 countries (the U.S. and Canada, as well as 27 in Europe), they do provide some insights.

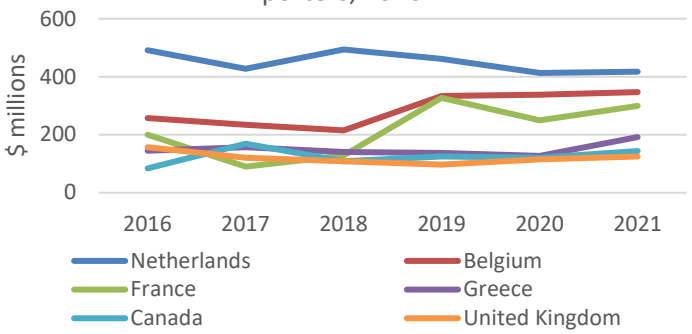
Figure 1: Exports of WT&D Services, 2021



Source: WTO

WTO data suggest that cross-border trade in WT&D services is very small. In 2021, exports of such services accounted for less that 0.5 percent of total commercial services exports in each of the countries for which data are available. Among these countries, the Netherlands was the top exporter (with $417 million) followed by Belgium ($347 million) and France ($299 million) (figure 1). The Netherlands is home to two large environmental services firms, Arcadis NV and Antea Group NV, while the world's largest environmental services firm—Veolia—is based in France. The Netherlands was also the top importer in 2021 (with $366 million) followed by Canada ($353 million), France ($343 million), and Belgium ($331 billion). Greece—the fourth-largest exporter in 2021—posted the largest surplus ($95 million). Major firms include Antipollution SA (which partnered with Veolia UK to provide management services for damaged or destroyed shipping cargo), Karkanias S.A. (a solid waste and wastewater management firm that operates in the Balkans), and Polygreen (which joined with UAE-firm Bee'ah to form Evogreen, a provider of marine and maritime waste management in the Middle East).

Figure 2: WT&D Services Exports by Leading Exporters, 2016-21



Source: WTO

[1] Data on global trade in environmental services as a whole, and in certain industry segments such as sewage treatment, air pollution management, and environmental consulting, are unavailable. Environmental Business International (EBI) provides some estimates on global trade by the environmental industry as a whole (including both goods and services), but not by environmental services suppliers, specifically.

[2] While differing definitions of the industry make it difficult to determine the relative size of the WT&D segment, a 2020 USDOC publication estimates that solid waste management—a component of WT&D—was the largest segment of the U.S. environmental services industry in 2017.

WT&D services were relatively resilient to the overall downturn in services trade during the first year of the COVID-19 pandemic. In 2020, WT&D services exports decreased by 5.9 percent from the prior year among countries for which data are available, much less than the 17.3 percent decline in total global commercial services exports. Further, four of the top ten WT&D services exporters—Belgium, the UK, Poland, and Denmark—posted growth in such exports in 2020 (figure 2). The WT&D segment is typically characterized by steady growth, as demand is tied to waste generation from consumer and business activity. While major WT&D services firms reported decreasing revenues due to lower demand from industrial and commercial customers in 2020, increased household and medical waste, growth in single-use goods, and the role of waste management as an essential service likely mitigated this impact.

WTO data suggest that European WT&D services trade is regionally concentrated, with most EU exports of such services destined for other EU markets. For example, 90 percent or more of WT&D exports from the Czech Republic, France, the Netherlands, Romania, the Slovak Republic, and Slovenia were to EU partners in 2019, the latest year for which country-specifc data on exports to the EU are available. The relatively low level of exports by U.S. WT&D services suppliers—which include some of the world's largest waste treatment firms (table 1)—suggests that U.S. supply of these services is highly oriented towards the domestic market.

Table 1: World's Top Waste Management Firms, FY 2022

Firm	Country	Revenues ($bil)
Veolia	France	45.9
Waste Management	U.S.	19.7
Republic Services	U.S.	13.5
Suez	France	7.3
Waste Connections	U.S.	7.2

Source: Statista

Regional and domestic market concentration reflects the nature of WT&D activities, many of which are best provided by geographically proximate firms. Some tasks—such as feasibility studies, facility monitoring, and the treatment of imported waste—can be provided on a cross-border basis.[3] However, activities that require a rapid response, rely on infrastructure, or entail long-term market commitment—such as oil spill clean up or solid waste collection—are difficult or impractical to provide without a commercial presence in a local or neighboring market.[4] As such, cross-border trade is likely not the primary means of providing WT&D services across borders. While comparable data on transactions by foreign affiliates are not available, Bureau of Economic Analysis (BEA) data indicate that sales by U.S. waste management and remediation services affiliates to foreign customers were $3.6 billion in 2021, far higher than U.S. WT&D cross-border services exports ($17 million) in that year. Further, information posted by several large environmental services providers (such as Veolia, AECOM, and Jacobs) suggest that these firms provide WT&D services through overseas affiliates.

Sources: APEC, "Environmental Services in the APEC Region," May 2021; Antipollution, Company Profile, accessed Aug. 18, 2023, 18; BEA, "Table 2.1" and "Table 4.1," accessed Dec. 11, 2023; IBISWorld, Waste Treatment & Disposal Services in Canada, Aug. 2023, 22; IBISWorld, Waste Treatment & Disposal Services in the US, Jan. 2023, 27; Karkanias, "Our Company," accessed Dec. 7, 2023; Polygreen, "Evogreen," Jun. 11, 2021; Sarkodie and Owusu, "Impact of COVID-19 Pandemic," Aug. 2020, 7958-7959; Statista, "Revenue of selected major waste management companies," May 2023; UN Statistics Division, "Correspondence between the EBOPS 2010 and the Central Product Classification;" USDOC, "2019 Top Markets Report: Environmental Technologies," Apr. 2020, 4; WTO, "Background Note on Environmental Services," Aug. 20, 2010; and WTO STATS Portal, Trade in Commercial Services, accessed Sep. 19, 2023.

[3] Digital technology developments may also expand the feasibility of cross-border trade in environmental services.
[4] Several WTO members did not undertake commitments on the cross-border trade of refuse disposal and sanitation services, indicating that such transactions were technically infeasible.