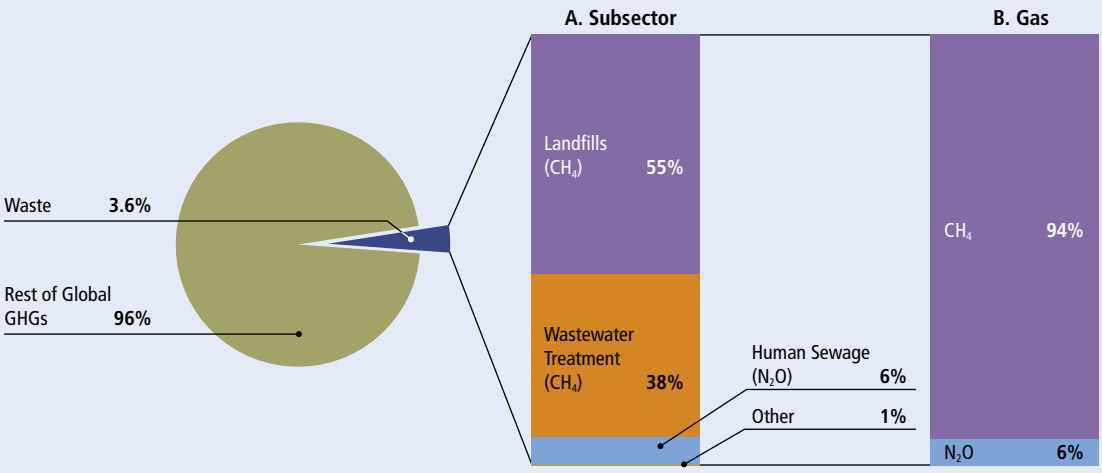
CHAPTER 16

Waste

Emissions

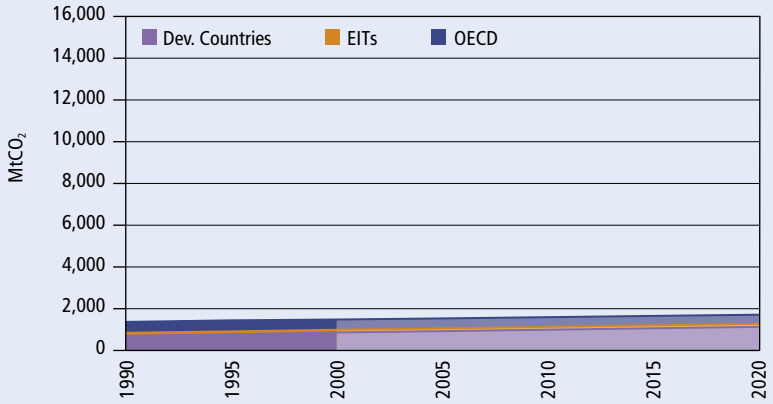
Emissions from waste[178] account for just under 4 percent of global GHG output (Figure 16.1). The largest source of emissions from this sector is landfilling of solid waste, which emits CH_4. Emissions here result from anaerobic decomposition of organic matter. These emissions can also be captured as natural gas and channeled to productive purposes. Handling and treatment of wastewater, which also emits CH_4, is the second largest source. A small share of waste emissions also comes from N_2O from treatment of human sewage. Overall, CH_4 accounts for a vast majority of emissions from this sector, at more than 90 percent. It

Figure 16.1. GHGs from Waste



Sources & Notes: EPA, 2004. See Appendix 2 for sector definitions and data sources. Absolute emissions in this sector, estimated here for 2000, are 1,484 $MtCO_2$.

Figure 16.2. GHGs from Waste, Trends and Projections



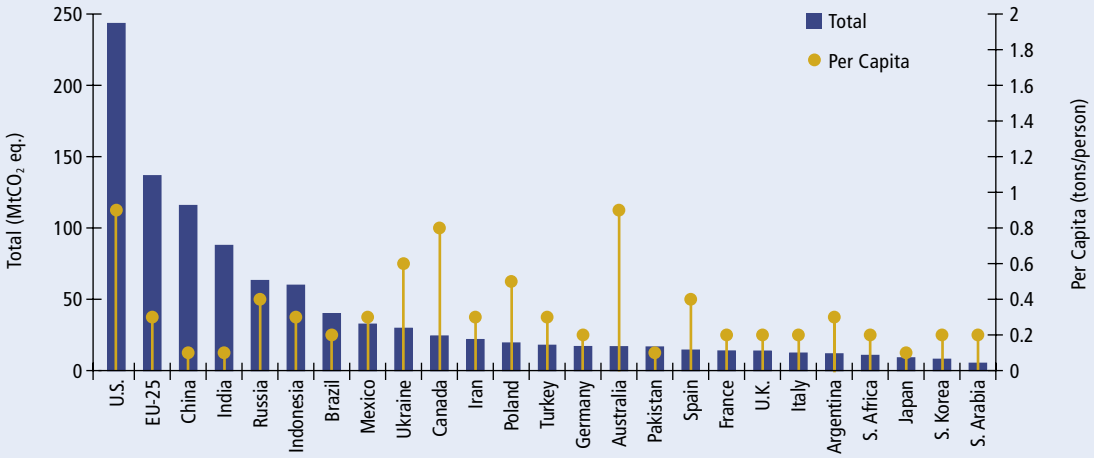
Source: EPA, 2004.

should be noted, however, that data uncertainties are likely to be high in this sector, as with agriculture and LUCF. Data from the waste sector is also less complete than others in terms of country coverage. Figure 16.3 shows GHG emissions from waste for the major GHG-emitting countries. The largest shares come from the United States and EU.

Sector Context

Waste disposal is typically a public sector function, often at the local or municipal level. This includes the operation of solid waste disposal sites as well as treatment facilities for industrial and residential wastewater. Accordingly, international competition and trade are not significant factors, nor are concerns over attribution, and actors tend to be dispersed at the local level.

Figure 16.3. GHGs from Waste, Total and Per Capita, 2000
Top 25 GHG emitters



Source: WRI, CAIT.