Waste management in Europe: companies, structure and employment

By

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# Introduction

This paper examines the waste management sector in Europe in 2012.

There have been few changes of ownership since 2007, and the largest multinational companies in the sector remain Veolia and Suez, followed by FCC and Remondis. The companies are getting less business and less profit than they expected because the industrial and commercial waste market has shrunk. They are attempting to restore profits by cutting costs, including in their contracts with municipalities.

Employment in the sector appears to have been volatile since 2008 as a result of the recession , with different results in different countries. About half the jobs are in the recycling and production of new materials, but collection and sorting of household waste, and civic amenity sites, remain the largest areas of stable employment in the sector. In the EU as a whole employment has continued to grow to nearly 1million, of which roughly 200,000 are public sector, 200,000 employed by multinationals, and 600,000 by other local and national private operators.

The public private split in municipal waste collection and processing is roughly equal in the largest countries Germany, UK and France. There is a significant amount of remunicipalisation of services, however, which could grow stronger, especially as there is now yet more evidence that the private sector is no more efficient than the public sector.

While EU legislation continues to drive expansion of waste services, the role of the public sector is undermined by EU institutions giving too much encouragement to PPPs, especially private incinerators. At the same time, the private companies are experiencing a drop in demand from industry, and seeking to compensate by cutting costs across the board, including their municipal services. The waste companies are also attempting to gain new business by importing toxic waste, which has led to strong public resistance.

This report is the latest in a series of PSIRU papers for EPSU, which includes reports for 2010 at <http://www.psiru.org/sites/default/files/2010-02-G-EWCs.doc> , and <http://www.psiru.org/sites/default/files/2010-02-G-trends.doc> ; and for 2007 at <http://www.psiru.org/sites/default/files/2007-06-G-EWCs.doc> )

# Companies

## Largest companies by size

The major waste companies in Europe are shown in table 1, in order of size of revenues from waste management in Europe.

These companies fall into five main categories.

* The French companies Suez and Veolia (and Seche-SAUR), with major government shareholdings;
* the Spanish companies, subsidiaries of major listed construction groups FCC, ACS, and Ferrovial;
* ‘traditional’ private companies, led by the German groups Rethmann-Remondis and Alba;
* two companies owned by private equity funds: the Dutch AVR/van Gansewinkel, and Biffa (UK);
* and municipally owned companies.

This last category is represented on this list of internationally active companies by the Dutch municipal company Delta, but municipal companies remain important operators within most countries, notably Germany. In many countries there are also private waste companies operating only in their home country.

There have been few major mergers or takeovers in the European waste sector over the last 4 years, in contrast to the extreme burst of buying and selling of waste companies, driven by private equity (PE), in the 2003-2007 period. Moreover, the two companies which are still owned by private equity groups – Biffa and Van Gansewinkel - are now experiencing the worst problems (see below).

1. **Largest municipal waste management companies in Europe 2012 (P=private; PE=private equity; S=stock exchange listed; Mun=municipal)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Company | Company website | Parent company | Parent country | Parent type |  | Revenue (€m., waste, EU) | year |
| Veolia  | [www.veolia-environmentalservices.com](http://www.veolia-environmentalservices.com/) | Veolia Environnement | France | S | EUR | 7099 | 2011 |
| Suez Environnement | [www.suez-environnement.com](http://www.suez-environnement.com/) | GdF-Suez | France | S | EUR | 6417 | 2011 |
| Remondis | [www.remondis.com](http://www.remondis.com/) | Rethmann | Germany | P | EUR | 5300 | 2010 |
| Alba | [www.alba.info](http://www.alba.info/) | Alba Group  | Germany | P | EUR | 2700 | 2010 |
| FCC  | www.fcc.es | FCC  | Spain | S | EUR | 2571 | 2011 |
| Indaver | [www.indaver.com](http://www.indaver.com/) | Delta NV | Neth-erlands | Mun | EUR | 2185 | 2011 |
| Urbaser | [www.urbaser.com](http://www.urbaser.com/) | ACS | Spain | S | EUR | 1686 | 2011 |
| van Gansewinkel  | [www.vangansewinkelgroep.com](http://www.vangansewinkelgroep.com/) | KKR/CVC | US/UK | PE | EUR | 1186 | 2011 |
| Cespa | [www.cespa.es](http://www.cespa.es/) | Ferrovial | Spain | S | EUR | 952 | 2011 |
| Biffa Group | [www.biffa.co.uk](http://www.biffa.co.uk/) | Montagu PE | UK | PE | GBP | 850 | 2011 |
| Shanks group | www.shanksplc.co.uk |   | UK | S | GBP | 750 | 2011 |
| CNIM | [www.cnim.com](http://www.cnim.com/) |   | France | S | EUR | 665 | 2011 |
| Lassila & Tikanoja | [www.lassila-tikanoja.com](http://www.lassila-tikanoja.com/) |   | Finland | S | EUR | 652 | 2011 |
| Ragn-Sells | [www.ragnsells.com](http://www.ragnsells.com/) |   | Sweden | P | SEK | 511 | 2011 |
| SAUR-Seche | [www.groupe-seche.com](http://www.groupe-seche.com/)  | Seche environnement | France | S | EUR | 342 | 2011 |
| Saubermacher | [www.saubermacher.com](http://www.saubermacher.com/)  |   | Austria | P | EUR | 294 | 2011 |

Source: company reports; PSIRU calculations

Table 2 shows companies eligible for EWCs in the waste management sector. It includes all the above companies (except Biffa, which now operates only in the UK), and some other smaller companies which operate internationally, such as the French company Nicollin and the Austrian Becker. The latest known employment figures are given, where available.

Annex A below shows a detailed picture by country, showing which company is operating in each country of the EU and EECA, together with employment in that country, where known.

## Companies eligible for EWCs

1. **Waste companies eligible for EWCs**

 (P=private; PE=private equity; S= stock exchange listed; Mun=municipal. Employees are for the whole group and for Europe, unless otherwise stated)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Company** |  | Parent/website | Type | **Waste management operations in countries**  | **Employees**  |  |
| **Alba/Intersoh** | DE | Alba [www.alba-online.de](http://www.alba-online.de)  | P | Bosnia, Germany, Poland, Slovakia | **9000** | 2011 |
| **AVR/Van Gansewinkel** | NL | KKR/CVC [www.vangansewinkelgroep.com](http://www.vangansewinkelgroep.com)  | PE | Belgium, Czech Republic, France, Germany, Hungary, Ireland, Luxembourg, Netherlands, Poland, Portugal and UK | **6435** | 2011 |
| **Becker** | DE |  [www.jakob-becker.de/](http://www.jakob-becker.de/) | P | Albania, Austria, Croatia, Czech Republic, Germany, Italy, Poland, Serbia | **1800** | 2011 |
| **Cespa** | ES | Ferrovial <http://www.cespa.es> | S | Portugal, Spain, UK | **15808** | 2011 (Cespa only) |
| **CNIM** | FR | CNIM [www.cnim.com](http://www.cnim.com) | S | Azerbaijan, France, Italy, Russia, UK | **2660** | 2011 |
| **Indaver/Delta** | NL | [www.delta.nl](http://www.delta.nl)  | Mun | Belgium, Germany, Ireland, Italy, Netherlands, Portugal, UK | **1685** | 2011 |
| **FCC (and ASA, WRG)** | ES | FCC [www.fcc.es](http://www.fcc.es) | S | Austria, Bosnia, Bulgaria, Croatia, Czech Republic, Hungary, Italy, Macedonia, Montenegro, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, UK, Ukraine | **91291** | 2011 (whole group) |
| **Lassila & Tikanoja** | FI | Lassila & Tikanoja [www.lassila-tikanoja.com/](http://www.lassila-tikanoja.com/) | S | Finland, Latvia, Russia, Sweden | **9357** | 2011 |
| **Ragn-Sells** | SV | Ragn-Sells [www.ragnsells.se](http://www.ragnsells.se)  | P | Denmark, Estonia, Latvia, Norway, Poland, Sweden | **2646** | 2011 |
| **Remondis** | DE | Rethmann [www.remondis.com](http://www.remondis.com) | P | Austria, Belarus, Belgium, Bulgaria, Czech republic, Estonia, France, Germany, Hungary, Ireland, Italy, Netherlands, Poland, Romania, Slovakia, Spain, Sweden, Switzerland, Turkey, UK, Ukraine | **17100** | 2011 |
| **Saubermacher** | AT | [www.saubermacher.at](http://www.saubermacher.at)  | P | Austria, Croatia, Czech Republic, Hungary, Romania, Slovenia | **4145** | 2011 |
| **Séché-SAUR** | FR | [www.groupe-seche.com](http://www.groupe-seche.com)  | S | France, Germany, Spain, Hungary, Italy | **1671** | 2011 |
| **Shanks** | UK | Shanks Group [www.shanks.co.uk](http://www.shanks.co.uk) | S | Belgium, Netherlands, UK | **4094** | 2011 |
| **Suez** | FR | Suez [www.suez-environnement.com](http://www.suez-environnement.com) | S | Belgium, Czech Republic,Finland, France, Germany, Hungary, Ireland, Netherlands, Poland,Slovakia, Sweden, UK | **66795** | 2011 (waste, Europe) |
| **Urbaser** | ES | ACS [www.urbaser.es](http://www.urbaser.es)  | S | France,Greece, Italy, Portugal, Spain, UK | **34354** | 2011 (Urbaser only) |
| **Veolia** | FR | Veolia[www.veoliaenvironnement.com/](http://www.veoliaenvironnement.com/)  | S | Austria, Belgium, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Ireland, Italy, Norway, Poland, Switzerland, UK, Ukraine | **52105** | 2011 (waste, Europe) |

## Major companies

### Veolia

Veolia operates in water, environmental services, energy services and public transport. It is one of the two leading multinationals in each of these sectors (the other being GDF-Suez). In 2011 Veolia had total sales of $29.6 billion.

It is 9.21% owned by the French state financial group Caisse des depots, and 3.96% owned by EdF, which is itself 85% state-owned.

1. **Ownership of Veolia shares 2012**



1. **Veolia sales revenue 2011**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *(€ million)*  | France | Germany | UnitedKingdom | CentralandEasternEurope | OtherEurope | UnitedStates | Oceania | Asia | MiddleEast | Restof theworld | **Total** |
| Water | 4,560.1 | 1,519.3 | 811.6 | 1,066.1 | 775.7 | 743.0 | 238.6 | 1,573.3 | 281.0 | 1,048.4 | **12,617.1** |
| Waste services | 3,384.2 | 1,210.2 | 1,626.0 | 309.7 | 568.6 | 1,230.3 | 704.6 | 237.8 | 105.1 | 363.7 | **9,740.2** |
| Energy Services | 3,515.1 | 9.5 | 194.2 | 1,414.1 | 1,401.4 | 314.0 | 49.8 | 100.6 | 93.4 | 197.9 | **7,290.0** |
| **TOTAL** | **11,459.4** | **2,739.0** | **2,631.8** | **2,789.9** | **2,745.7** | **2,287.3** | **993.0** | **1,911.7** | **479.5** | **1,610.0** | **29,647.3** |

Source: Veolia Report 20F 2011 <http://www.finance.veolia.com/docs/VE-20-F-2011-EN.pdf>

1. **Veolia employees 2011**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Area | Water | Environmental Services | Energy Services | Transportation | **TOTAL** | % |  |
| Europe | 57,832 | 52,629 | 37,110 | 77,910 | **228,179** | 68.88% |  |
|  *Of which France* | *26,937* | *23,569* | *13,688* | *38,607* | ***105,499*** | *31.85%* |  |
| North America | 3,563 | 9,062 | 700 | 17,375 | **30,700** | 9.27% |  |
| South America | 6,743 | 7,395 | 7,865 | 1,212 | **23,215** | 7.00% |  |
| Africa/ Middle East | 8,761 | 2,670 | 2,125 | 971 | **14,527** | 4.39% |  |
| Asia/Pacific | 19,752 | 5,665 | 4,898 | 4,330 | **34,645** | 10.46% |  |
| **TOTAL** | **96,651** | **77,421** | **52,698** | **101,798** | **331,266** | **100%** |  |
| % | 29% | 24% | 16% | 31% | **100%** |  |  |

Source: Veolia Report 20F 2011 <http://www.finance.veolia.com/docs/VE-20-F-2011-EN.pdf>

In 2011 Veolia wrote off €818million, and continued to carry high debt. Veolia is trying to deal with this through cutting costs and restructuring the company. This includes:

* Selling €5billion worth of subsidiaries in order to reduce debt. This included the sale of waste activities in Norway and Belgium
* Withdrawal from transport services, so that the business is reduced to three core
* Reducing the number of countries in which it operates from 77 to less than 40
* Specifically, to reduce its presence in southern Europe (especially Italy) and North Africa

In 2012 it carried out further sales of major parts of its business, including the sale of its waste companies in the US for €1.9 billion Euros, and withdrawing from its waste businesses in Egypt, Morocco and Senegal.[[1]](#endnote-1)

* Veolia is in the process of selling its 50% stake in Transdev, its transport division.
* Veolia is also planning to sell its 25% stake in Berlinwasser, after the exit of RWE.[[2]](#endnote-2)

Veolia has no clear strategy for waste management apart from sale of subsidiaries, cost cutting and PFI (PPP) contracts in the UK. Veolia is pleased with the profitability of its 12 PFI waste treatment contracts in the UK, with 25 year terms, guaranteed volumes, exclusive rights to municipal waste treatment, and as a result “high return on capital employed”. But in general, the crisis had reduced returns from recycled materials, and Veolia responded by cutting costs by €198m in 2009 and €61m. in 2010, including:

* Staff reduction in North America, UK and France
* Specific restructuring in Germany
* Efficiency measures (terminated loss-making operations, waste internalization, SG&A, etc.) [[3]](#endnote-3)

### Suez

Suez Environnement <http://www.suez-environnement.com> , consisting of the water and waste divisions of Suez, was spun off as a separate company in 2008. It is 35.7% owned by GdF-Suez, the company formed by the merger of Suez’ energy division with GdF. GdF is itself 35.7% owned by the French state.

In 2011 it had total sales of €14.8 billion – 28% (€4.2 billion) from water in Europe, 44% from waste in Europe, and 28% from activities outside Europe. [[4]](#endnote-4)

In 2011 and the first half of 2012 Suez waste profits in Europe suffered because of continued economic recession holding down waste volumes; competition (specifically in the Netherlands), and higher landfill tax in the UK. Like Veolia, however, Suez’ main strategy is to continue cutting costs, specifically including cutting overtime and not replacing workers who leave. [[5]](#endnote-5)

1. **Suez revenues (sales) and operating income (profits) by segment 2011**

|  |  |  |
| --- | --- | --- |
| Segment | Revenues (€million Euros) | Operating profit (€million Euros) |
| Water Europe | 4206 | 608 |
| Waste Europe | 6417 | 388 |
| International | 4197 | 131 |
| Other | 10 | (-87) |
| TOTAL | 14830 | 1039 |

Source: Suez Reference Document 2011 p. 111, 113 <http://www.suez-environnement.com/wp-content/uploads/2012/04/DDR-SEC-2011-Version-anglaise-d%C3%A9finitive.pdf>

1. **Suez Environnement: Employees by region (waste & water) 2011**

|  |  |
| --- | --- |
|  | **2011** |
| **France** | 35,654 |
| **Rest of Europe** | 31,141 |
| **North America** | 3,362 |
| **Latin America** | 238 |
| **Africa-Middle East** | 5,137 |
| **Asia-Oceania** | 4,878 |
| **TOTAL** | 80,410 |

Source: Suez Reference Document 2011 p. 160 <http://www.suez-environnement.com/wp-content/uploads/2012/04/DDR-SEC-2011-Version-anglaise-d%C3%A9finitive.pdf>

### Remondis

Remondis is the waste division of Rethmann, a privately owned German company. It bought the waste management division of RWE in 2005; in 2006 it bought 40% of the Dutch municipal waste company ARN. It operates in 20 European countries, and has also expanded outside Europe to Australia and Egypt. It has expanded into eastern Europe, including a waste management PPP in Minsk, the capiutal of Belarus.

Remondis is aware that environmental legislation creates more business opportunities, and in 2011 criticised the progress of the new environmental law in Germany for not being ambitious enough – the recycling rate of 65% for municipal waste was “not much more than the current levels today”, and 70% for construction waste was “way below what was achievable”. The company argued higher recycling rates would help ensure that “the German recycling sector maintains its technical edge”. But it also argued strongly against municipalities operating their own services: “the amendments to the law aim to disproportionately strengthen the position of local authorities in the area of collecting recyclables”.[[6]](#endnote-6)

### FCC

FCC is a large Spanish construction and services company with a large environmental services division, including ASA, an Austrian group with extensive contracts in central and eastern Europe. For some years it was indirectly controlled by Veolia, but their interests were sold back to the main Spanish shareholder, Esther Koplowitz, in 2004. FCC and Veolia still have a 50-50 joint venture in water and waste in Latin America. FCC is the leading waste management company in both Spain and the UK, and operates in France, Portugal, Spain, UK, Austria, Bosnia, Croatia, Czech Republic, Hungary, Poland, and Slovakia.

It also operates internationally in Latin America through Proactiva Medio Ambiente, a 50-50 joint venture with Veolia.

1. **FCC water and waste business 2011 (€millions)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Revenue |  |  | Profit  | Employees |
|  |  |  | Spain | Internat | Total | (EBITDA) |  |
| Total FCC |  |  | 5592 | 6163 | 11755 | 1252 | 91,291 |
| *of which:* | Environmental services |  | 2321 | 1414 | 3735 | 698 | 49,345 |
|  | *of which:* | Waste management | 1493 | 1078 | 2571 |  |  |
|  |  | Water | 668 | 177 | 845 |  |  |
|  |  | Industrial waste | 159 | 159 | 318 |  |  |

Source: [FCC Annual Report 2011](file:///%5C%5C193.60.77.220%5Cpsiru%5CWorking%5CProjects%5CWaste%20management%5Cwww.fcc.es%5Cfccweb%5Cwcm%5Cidc%5Cgroups%5Cpublic%5Cdocuments%5Cdocument%5Cmdaw%5Cmdi3%5C~edisp%5Ccscp039605.pdf)

### Van Gansewinkel/AVR

The group was bought in 2007 by two private equity funds, KKR and CVC. CVC own 38.2%, KKR own 32.5%, and the remaining shares are owned by Oranje-Nassau Groep (6.9%), Intermediate Capital Group (6.4%) and company management (16%). The Van Gansewinkel name remains as the brand covering the company’s waste collection services whilst the AVR brand stays to include all of the organisation’s treatment activities. AVR - Van Gansewinkel operates in nine countries (the Benelux, Poland, the Czech Republic, France, England, Ireland and Portugal).

The group has problems in dealing with the changes in market conditions and with the debt it carries because of the PE takeover.

* It closed a waste processing plant in 2009, with the loss of 128 jobs, citing a drastic fall in the prices obtained for secondary materials and processing over-capacity in Europe.
* In 2010 it closed one of its 3 incineration plants. In 2011, the group bought the waste business of Veolia in Belgium. It also says that its profitability was cut by €30m.
* In 2011 because of competition, which it dealt with by: “the vigorous efficiency programme Fit for the Future throughout the entire Group, which served to limit the drop in our profit margin. We succeeded in realising the savings targeted with that programme: truly an outstanding achievement.”
* It had to renegotiate its debt with its banks in 2011 but is under pressure to reduce its debt further.
* In 2012 it now takes the view that incineration is no longer the main growth area:

“Regrettably, we were unable to sufficiently compensate the erosion of rates at the Dutch collection activities. The prices are under pressure as a result of the overcapacity in the incineration market. Van Gansewinkel expects this market to regain more balance in the future, as a result of the considerable volumes of waste imported from abroad. This is good and a cause for optimism in the short term. However, in the long term it does not offer a proper structural solution. T he global scarcity of raw materials will cause the importance of waste incineration to diminish and that of high-quality reuse of materials to increase. In our view, the latter argument is the main reason for structurally phasing out capacity in the Netherlands. Waste incineration will become less important in our industry. As a consequence, plants not located centrally, that lack the necessary scale and have limited possibilities to access grids for heating (households) and steam (businesses), will be particularly concerned about the future.” [[7]](#endnote-7)

In 2012 there was a split on the board of directors when the independent directors opposed the appointment of Cees van Gent as CEO, who was seen as a ‘hard man’ chosen by KKR and CVC, but the directors were forced to resign and Van Gent was appointed as CEO.

# Employment

## Employment in waste management in EU countries

The latest Eurostat data shows that over 900,000 people are employed in the waste sector across the EU, including in materials recovery. This represents about 0.44% of the total numbers employed in the EU as a whole, but the percentage varies across countries.

 In the EU as a whole, employment in this sector apparently fell sharply between 2008 and 2009, but all of this was due to a very sharp fall in the UK figures – for the rest of the EU, employment in the sector continued to rise, and rose even more sharply between 2010 and 2011. Individual countries other than the UK followed a range of different patterns, as can be seen in the table and the chart: in Germany and France there was little or no fall, followed by a rise; in Italy, there was a steep rise, followed by a sharp fall; in Spain and Poland, there was a rise in 2009, a fall in 2010, and a rise in 2011; in both Greece and Hungary, there was a steady rise followed by a sharp fall in 2011; in Turkey, the extremely sharp rise may reflect the introduction of EU legislation in the sector.

The variations between countries may be partly due to people using different definitions of the sector, but this is less likely to change within each country over the space of a few years. So this variety in patterns of change suggests that country specific factors – such as the public-private mix - can be at least as important as general economic factors, like recession, or general political factors, like EU environmental policies. The recession might have suppressed demand for recycled ‘secondary’ materials, which depressed employment in the recycling segments, but national and local commitment to implementing EU waste policies has continued to create extra jobs in many countries.

1. Employment in waste sector by country, EU, 2008 to 20011

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Employment in waste sector** | **Total employment all sectors (millions)** | **Employment in waste sector as % of total** |
|  |  |  |  |  |  |  |
| **Year** | 2008 | 2009 | 2010 | 2011 | 2011 | 2011 |
| **European Union (EU27)** | 914800 | 893300 | 885800 | 928600 | 213 | 0.44% |
| ***EU27 excluding UK*** | *766000* | *777300* | *781100* | *810000* | *184.8* | *0.44%* |
|  |  |  |  |  |  |  |
| **Austria** | 14200 | 12900 | 12200 | 11200 | 4.1 | 0.28% |
| **Belgium** | 15500 | 17500 | 26200 | 22800 | 4.5 | 0.51% |
| **Bulgaria** | 14200 | 12600 | 12100 | 18300 | 2.9 | 0.63% |
| **Cyprus** |  |  | 600 | 700 | 0.4 | 0.19% |
| **Czech Republic** | 29100 | 26600 | 25900 | 24000 | 4.8 | 0.50% |
| **Denmark** | 16500 | 8100 | 7800 | 8600 | 2.6 | 0.33% |
| **Estonia** |  |  |  |  | 0.6 |  |
| **Finland** | 6500 | 6900 | 7100 | 6300 | 2.4 | 0.26% |
| **France** | 106900 | 104500 | 103700 | 113100 | 25.6 | 0.44% |
| **Germany** | 134000 | 138100 | 132800 | 146200 | 39 | 0.38% |
| **Greece** | 18700 | 19800 | 23300 | 20200 | 4 | 0.50% |
| **Hungary** | 17000 | 17400 | 19300 | 17200 | 3.8 | 0.46% |
| **Ireland** | 9500 | 9000 | 9500 | 8200 | 1.8 | 0.46% |
| **Italy** | 128800 | 140900 | 155900 | 148500 | 22.6 | 0.66% |
| **Latvia** | 2600 | 7100 | 5200 |  | 0.9 |  |
| **Lithuania** | 6500 | 5700 |  | 6000 | 1.3 | 0.45% |
| **Luxembourg** |  |  |  |  | 0.2 |  |
| **Malta** |  |  |  |  | 0.2 |  |
| **Netherlands** | 25700 | 26900 | 25000 | 21600 | 8.2 | 0.26% |
| **Poland** | 58500 | 65300 | 61200 | 67000 | 15.9 | 0.42% |
| **Portugal** | 23100 | 15000 | 15700 | 17600 | 4.6 | 0.39% |
| **Romania** | 32800 | 28700 | 33300 | 34800 | 8.8 | 0.40% |
| **Slovakia** | 18800 | 18600 | 17100 | 14600 | 2.3 | 0.62% |
| **Slovenia** | 4300 | 5800 | 6300 | 8100 | 0.9 | 0.89% |
| **Spain** | 67900 | 75800 | 61900 | 75700 | 18 | 0.42% |
| **Sweden** | 12000 | 11600 | 12700 | 14100 | 4.5 | 0.31% |
| **United Kingdom** | 148800 | 116000 | 104700 | 118600 | 28.2 | 0.42% |
|  |  |  |  |  |  |  |
| **Iceland** |  |  |  |  | 0.2 |  |
| **Norway** | 8500 | 9600 | 8800 | 9800 | 2.5 | 0.40% |
| **Switzerland** | 7600 | 7900 | 8300 | 7200 | 4.2 | 0.17% |
| **Croatia** | 13600 | 11500 | 10800 | 11100 | 1.4 | 0.77% |
| **Macedonia** |  |  |  | 5400 | 0.6 | 0.85% |
| **Turkey** |  | 28300 | 66100 | 93700 | 23.5 | 0.40% |

Source: Eurostat, lfsa\_egan22d (Employment age 15-64 in Waste collection, treatment and disposal activities; materials recovery, NACE 2 E38) <http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/data/database>

1. Changes in employment in waste sector, largest EU countries + Turkey

Source: PSIRU calculations from Eurostat, lfsa\_egan22d (Employment age 15-64 in Waste collection, treatment and disposal activities; materials recovery, NACE 2 E38) <http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/data/database>

 The Eurostat data may underestimate the number of jobs in the sector. A 2009 EU paper estimated that the sector employed between 1.2 and 1.5million people – between 205 and 50% higher than the Eurostat data shows.[[8]](#endnote-8) Reports in France and the UK estimate that employment in each country was about 150,000 in 2009/2010, also about 50% higher than Eurostat. The France and UK reports include separate figures for public sector (municipal) jobs– mainly in the collection of household waste (for more details on sub-sectoral breakdown see below). Many of these may be classified under a different sector in the Eurostat survey data.

It is therefore possible that the Eurostat data largely reflects private sector or even casual employment, which has been heavily affected by the recession, but understates the level of municipal employment, which is more stable as it is linked almost entirely to household waste collection and transfer. The French and UK reports also estimate that about two-thirds of the waste sector represents spending on household waste by municipalities, and that this municipal spending is worth about 0.5% of GDP. [[9]](#endnote-9)

1. Employment in waste sector, 2009-2010, France and UK reports

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Year | Total | % of total  | Private | Municipal | Source |
| France | 2009 | 151,000 | 0.5% | 126,000 | 25,000 | [Marchés et emplois des activités liées aux déchets](http://www2.ademe.fr/servlet/getDoc?cid=96&m=3&id=80873&p2=14227&ref=14227)  |
| UK | 2010 | 150,000 | 0.5% | 128,000 | 22,000 | [From Waste Management to Resource Recovery](http://www.bis.gov.uk/assets/biscore/business-sectors/docs/f/11-1088-from-waste-management-to-resource-recovery)   |

## Overall estimate for Europe

It is possible to make a reasonable approximate estimate of employment in the sector as a whole across Europe, between public sector, multinationals, and other smaller contractors. Total employment is nearly 1m. according to Eurostat. Employment by multinationals in Table 2 is approximately 200,000, excluding employees of the companies in other sectors. Data on the public private split in the next section suggests that public employees represent 20% or less of the total sector, based on the the pattern in France and estimating the EU average for public refuse collection as 50%, as in the largest three countries.

Combining this data, the EU picture is roughly:

* Total employment 1 million
* Of which:
	+ Public sector 200,000
	+ Multinationals 200,000
	+ Other private 600,000

## Employment by different segments and occupation

A report on France prepared in 2010 by Ademe, the French government environment agency, gives employment figures for the different stages and types of waste management. It also gives estimates of the number of employees per 1000 tonnes, and the proportion which is outsourced. [[10]](#endnote-10)

The biggest areas of employment are household waste collection and sorting and civic amenity sites, with over 51,000 jobs, one-third of the total. These are also the segments in which a significant proportion of jobs are in the public sector. By comparison, landfill, incineration and composting combined have about 8,000 jobs, and hazardous waste collection and treatment employs nearly 7,000 .

Half of all jobs are in recovery of re-useable materials (30,000) and reprocessing into new products (46,000), and the study implies that there are very few municipal jobs in this area. The UK study also found that a high proportion of these jobs are with very small companies.

The French report also estimates how much labour is required per 1000 tonnes of waste by each element in the process. Household collection, mixed or separate, involves about 1.4 fte jobs, sorting centres 0.7 fte jobs, and civic amenity sites 1.0 fte jobs. By comparison, landfill sites require 0.1 fte per 1000 tonnes, and incinerators 0.3 fte.

1. Employment in different segments of waste services (France, 2009)

Source: Calculated from ADEME Oct 2010 Markets and employment in waste related activities situation 2008/2009 - outlook 2010 <http://www2.ademe.fr/servlet/getDoc?cid=96&m=3&id=80873&p2=14227&ref=14227>

1. Employment and productivity in different waste segments (France, 2009)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Jobs (fte) per 1000 tonnes | Total private jobs in France 2009 | Percent private | Total jobs  |
| 1. COLLECTION
 |  |  |  |  |
| Mixed household waste collection | 1.4 | 13653 | 50% | 27306 |
| Separate household waste collection | 1.3 | 4220 | 60% | 7033 |
| Sorting centres for household waste | 0.7 | 2493 | 94% | 2652 |
| Transfer stations  | 0.2 | 1578 | 70% | 2254 |
| Civic amenity sites | 1.0 | 5446 | 45% | 12102 |
| Mixed small business waste collection | 0.7 | 5010 | 90% | 5567 |
| Separate small business waste collection | 0.4 | 1056 | 95% | 1112 |
| Sorting centres for small business waste | 0.7 | 1899 | 97% | 1958 |
| 1. TREATMENT
 |  |  |  |  |
| Incineration | 0.3 | 3709 | 93% | 3988 |
| Landfill | 0.1 | 1778 | 90% | 1976 |
| Biological treatment (composting) | 0.4 | 1809 | 84% | 2154 |
| Sewage sludge | 0.5 | 753 |  |  |
| 1. RECOVERY
 |  | 30000 |  | 30000 |
| 1. RECYCLING (NEW PRODUCTS)
 |  | 46000 |  | 46000 |
| 1. HAZARDOUS WASTE
 |  | 6750 |  | 6750 |
| TOTAL (rounded) |  | 127000 |  | 151000 |

Source: ADEME Oct 2010 Markets and employment in waste related activities situation 2008/2009 - outlook 2010 <http://www2.ademe.fr/servlet/getDoc?cid=96&m=3&id=80873&p2=14227&ref=14227>

A report on the UK shows why the private sector promotes incineration, as it has much higher ‘gross value added’ per worker than other processes, and so greater scope for profitability. Together with waste collection it represents about half of all the value added in the sector.

1. Employment and value added by sub-sector: UK 2010

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Empees | % Of all employees | Gross value added (GVA) | % of all GVA | GVA per empee (£000) |
| Carrying and collection | 28160 | 22 | 2025 | 27 | 72 |
| Sorting and sale | 21760 | 17 | 1275 | 17 | 59 |
| Brokerage or dealing | 19200 | 15 | 750 | 10 | 39 |
| Composting | 10240 | 8 | 375 | 5 | 37 |
| Processing of recyclate | 21760 | 17 | 900 | 12 | 41 |
| Incineration/energy recovery | 17920 | 14 | 1800 | 24 | 100 |
| Landfill | 5120 | 4 | 225 | 3 | 44 |
| Treatment | 3840 | 3 | 150 | 2 | 39 |

Source: [From Waste Management to Resource Recovery](http://www.bis.gov.uk/assets/biscore/business-sectors/docs/f/11-1088-from-waste-management-to-resource-recovery)

# Public-private split

## Public employment and public trust

The split between public and private sector matters to workers in terms of employment and conditions of work, as shown by the widespread disputes in the sector (reviewed in the previous report <http://www.psiru.org/sites/default/files/2010-02-G-trends.doc> ).

There is also evidence that it matters to the public, who have greater confidence in the public sector, even in incineration which is often controversial due to its environmental impact. Much of the recent re-municipalisation in Germany is supported by a generally higher public trust in municipal operators. Research carried out for the UK government by the opinion poll company Ipsos Mori found that the public opinion was wary of incineration, and: “the *operator* of the incinerator appears significant; people want strict operating guidelines and are more likely to support and trust incineration in the hands of the local authority as opposed to a private contractor.”[[11]](#endnote-11)

The following table shows recent data for the public/private split in employment in the collection of municipal waste in some EU countries.

1. Public/private split in employment: municipal waste collection

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Country | Public % | Private % | *year* | Source |
| Germany | 45 | 55 | *2007* | [In- und Outsourcing in der kommunalen Abfallwirtschaft](http://kommunalwiki.boell.de/index.php/In-_und_Outsourcing_in_der_kommunalen_Abfallwirtschaft)  |
| UK | 44 | 56 | *2010* | [From Waste Management to Resource Recovery](http://www.bis.gov.uk/assets/biscore/business-sectors/docs/f/11-1088-from-waste-management-to-resource-recovery)   |
| France | 54 | 46 | *2010* | [Marchés et emplois des activités liées aux déchets](http://www2.ademe.fr/servlet/getDoc?cid=96&m=3&id=80873&p2=14227&ref=14227)  |
| Spain | 24 | 76 | *2009* | [CIRIEC N° 2010/03](http://www.ciriec.ulg.ac.be/fr/telechargements/WORKING_PAPERS/WP10-03.pdf)   |
| Bulgaria | 25 | 75 | *2009* | [Walqing 2011 The Sector of Waste Collection in Bulgaria](http://www.walqing.eu/fileadmin/download/external_website/publications/WALQING_socialpartnershipseries_2011.19_Waste_BUL.pdf)  |

* The figures for Germany come from a Heinrich Boell Stiftung survey, weighted by population, excluding null responses, and treating ‘mixed’ public-private providers as private (the survey found 36% municipal, 25% private, 19% mixed, and 20% ‘nicht zustaendig’). The simple numbers of municipalities, without weighting for population, showed a lower proportion of municipal services, indicating that the larger municipalities are more likely to carry out their own collection service.[[12]](#endnote-12)

* The report on the UK states that 57% of municipalities carry out refuse collection through an inhouse service, but the population estimates suggest that the larger municipalities are more likely to outsource (this is the opposite of the results for Germany, see above).
* In Bulgaria, the public sector share fell sharply in 6 years from 65% in 2003 to 25% in 2009.[[13]](#endnote-13)
* The report on Spain estimates that municipalities have a 24% share of collection of household waste – significantly lower than in Germany, France and UK – but still carry out 21% of waste treatment and elimination, which is higher than France and UK.
* The report on France also estimates the public private split for a number of sub-sectors. The table shows that the sub-sectors with the greatest number of jobs – household waste collection, civic amenity sites – are also the areas where the public sector has its main presence.
* Data on Italy is less clear, as an apparently high level of municipally owned operators obscures the fact that many of these do not carry out the services using their own direct labour, but rather sub-contract work to private firms.[[14]](#endnote-14)

1. Public-private jobs in waste management by sub-sector: France 2009

|  |  |  |  |
| --- | --- | --- | --- |
|  | Total jobs  | public  | private |
| 1. COLLECTION |  |  |  |
| Mixed household waste collection | 27306 | 50% | 50% |
| Separate household waste collection | 7033 | 40% | 60% |
| Sorting centres for household waste | 2652 | 6% | 94% |
| Transfer stations  | 2254 | 30% | 70% |
| Civic amenity sites | 12102 | 55% | 45% |
| Mixed small business waste collection | 5567 | 10% | 90% |
| Separate small business waste collection | 1112 | 5% | 95% |
| Sorting centres for small business waste | 1958 | 3% | 97% |
| 2. TREATMENT |  |  |  |
| Incineration | 3988 | 7% | 93% |
| Landfill | 1976 | 10% | 90% |
| Biological treatment (composting) | 2154 | 16% | 84% |

Source: [Marchés et emplois des activités liées aux déchets](http://www2.ademe.fr/servlet/getDoc?cid=96&m=3&id=80873&p2=14227&ref=14227); PSIRU calculations

## Remunicipalisation

The general rise of remunicipalisation in Europe can also be seen in the waste management sector (for general background on this trend, see the PSIRU report for EPSU on [Re-municipalising municipal services in Europe](http://www.epsu.org/IMG/pdf/Redraft_DH_remunicipalization_2_.pdf) )

Since the mid-2000s, there has been some re-municipalisation of refuse collection contracts in Germany, France and the UK. The overall effect has certainly been to halt the earlier trend towards privatisation, although there are still cases of new privatisation, so it remains unclear if the overall result is towards public sector operation.

In Germany, there was a slight net remunicipalisation between 2004-2007. The key factors included improving the quality of service, greater control over policy, desire to avoid oligopolies, and social concerns for the workers’ pay and conditions. There was still a tendency to remunicipalisation in 2011. [[15]](#endnote-15)

In the UK, a number of local councils have also remunicipalised refuse collection. One example is Islington council in London, which decided to re-municipalise its waste collection, recycling and street cleaning services. Pay and conditions will be improved so that workers will earn at least the ‘London living wage’, but the inhouse service will still cost £3million per year less than the private contractor.[[16]](#endnote-16)

In France, there is also some remunicipalisation, which may be linked to continuing problems with managing the contractors –overwhelmingly Veolia and Suez. A 2011 report by the Cour des comptes, France’s public sector audit commission, noted : “real problems in their relations with private contractors” *(Une maîtrise difficile par les collectivités de leurs relations avec les prestataires privés)* including breaches of competition rules, and successive substantial modifications to contracts, in favour of the companies, after contracts have been awarded *(des manquements aux respects des règles de la concurrence ou des cas de modification substantielle de l’équilibre des contrats initiaux dans le temps (délégations ou marchés publics) du fait d’avenants successifs généralement favorables aux entreprises.).* This inability to control the private companies properly was one reason why costs were rising too rapidly. [[17]](#endnote-17)

## No public/private efficiency differences

Empirical evidence now strongly supports the view that the private sector is not generally more efficient than the public sector, in waste management as in other sectors.

### Empirical evidence: overview

A Spanish-American team analysed all econometric empirical studies of efficiency and privatisation in waste management and in water, and found “no systematic support for lower costs with private production…we do not find a genuine empirical effect of cost savings resulting from private production”. [[18]](#endnote-18) Two of the authors carried out a further empirical study on waste management in rural areas, finding that inter-municipal arrangements reduce costs but outsourcing does not: “small towns that cooperate incur lower costs for their waste collection service. Cooperation also raises collection frequency and improves the quality of the service in small towns. By contrast, the form of production, whether it is public or private, does not result in systematic differences in costs.” [[19]](#endnote-19)

This was further confirmed by a separate study in Spain, which found no efficiency difference between municipal and private: in “street cleaning and waste collectionservices in Spanish municipalities with a population exceeding50 000…..There is no difference between the inefficienciesobserved in municipalities managed directly by town councilsand those which have been transferred to private companies.” [[20]](#endnote-20)

These findings are supported by other recent studies that show that the private sector has no better efficiency record than the public sector, especially when other factors such as quality of services, quality of pay and conditions, corruption etc are taken into account.

### Comparative expenses of inhouse or outsourced refuse collection

Recent data from the UK also shows that the average net total cost of waste collection is slightly lower (by about 3%) for municipalities which operate an in-house service. Municipalities which outsource appear to have lower current expenditure, but they:

* employ staff costing over 5% of the contract value, to monitor the service
* still pay for capital investments, with more than half of the capital costs of inhouse services
* lose income worth more than 7% of the cost of the service

These factors more than offset the apparent reduction in current expenditure. The apparent cheapness of contractors’ operating costs is also frequently due to the low pay of private companies: in Germany in 2011, some contractors paid such poor pay and conditions that their workers claimed benefits. (The German employers and trade union Ver.di have now agreed a minimum wage for the sector that has been declared generally binding, to prevent such cut throat competition).[[21]](#endnote-21)

1. ﻿Costs for municipalities in UK for in-house or outsourced waste collection (£’000)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Collection  | Municipal employment costs  | Running Expenses including contracts | Total Expenditure  | Total Income\*  | Net Current Expenditure  | Capital Charges  | Net TotalCost  |
| In house  | 1626 | 2,283 | 3,909 | 841 | 3,068 | 198 | 3266.0 |
| Out sourced  | 210 | 3,604 | 3,813 | 553 | 3,261 | 109 | 3370.0 |

Source: [From Waste Management to Resource Recovery: A Developing Sector](http://www.bis.gov.uk/assets/biscore/business-sectors/docs/f/11-1088-from-waste-management-to-resource-recovery) 2011 Table 3.4

The UK report highlights the potential for municipalities to get income from waste services (but does not note the risks of a drop in demand that has been such a problem for the private companies):

“Local authorities can earn income from waste through the sale of recyclates, fines and penalties, and sale of energy from waste initiatives. However, this is likely to vary considerably by authority depending on their remit (waste collection authority or waste disposal authority), how they dispose of waste and the nature of the contracts. A key issue for waste collection authorities is that they often bear the cost of collection without necessarily seeing the benefit from the sale of recovered materials. The nature of contracts means that the beneficiary is often the waste disposal authority or private sector. The risk averse nature of local authorities is thought to diminish their ability to achieve income from their waste operations. In part, this explains why, as shown in Figure 3.6, local authority net costs on waste has been increasing since 2005/06 from £2,509m to £3,265m in 2009/10.” [[22]](#endnote-22)

# Municipal and commercial waste:

Although municipal collection and treatment of household waste is the main focus of public policy and contest over the relative role of public and private sector, the private companies also operates with the private sector, and problems here may spill over to create more pressure on employees of private companies working on municipal waste.

## Municipal waste and EU legislation

The EU legislation on waste management continues to drive the growth of this sector, including strict requirements to move away from landfill towards recycling or reuse. (See Annex B for a summary and references to the full range of EU legislation on waste management). This is enforced by the Commission, ultimately by bringing court cases to the ECJ: in 2010 there were 10 judgments in such cases against a range of member states, including the UK, France, Italy, Belgium, Portugal and Greece. [[23]](#endnote-23)

The latest general addition to the legislation is the new revised directive on e-waste, i.e. waste electrical and electronic equipment, or WEEE: [WEEE Directive 2012/19/EU](http://eur-lex.europa.eu/JOHtml.do?uri=OJ:L:2012:197:SOM:EN:HTML). This introduces a requirement from 2016 for separate collection of 45% of electronic equipment sold, rising by 2019 to 65 % of equipment sold, or 85 % of electronic waste generated. [[24]](#endnote-24)

## Trends in municipal waste generation and treatment

The continuing impact of the directives can be seen in the graphs below.

In 2009 municipal waste generated per person varied from 316 kg in the Czech Republic and Poland to 822 kg in Denmark and 778 in Cyprus. In general, countries with higher GDP per capita produce more waste, but there are variations between countries with similar levels of GDP. Municipal waste generated per capita in the EU as a whole has risen very little since 1999. [[25]](#endnote-25)

Out of all the municipal waste generated in the EU, 37% is still landfilled, but 20% is recycled, 20% is incinerated, and 18% is composted. Many new member states still use landfill for most or all municipal waste, while EU-15 countries have mainly changed to using incineration, composting and recycling.

1. Municipal waste generated and treated in 2009 by country and treatment category



 Source: Eurostat *Statistics in focus* — 31/2011 Generation and treatment of municipal waste (figure 4) <http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-11-031/EN/KS-SF-11-031-EN.PDF> .

For 2010 figures, see [STAT/12/48 27 March 2012 Landfill still accounted for nearly 40% of municipal waste treated in the EU27 in 2010](http://europa.eu/rapid/pressReleasesAction.do?reference=STAT/12/48&format=HTML&aged=1&language=EN&guiLanguage=en)

1. Projected generation and management of municipal waste in EU +Norway/Switzerland



Source: ETC/SCP working paper 4/2011 Projections of Municipal Waste Management and Greenhouse Gases <http://scp.eionet.europa.eu/wp/2011wp4>

## EU promotion of PPPs

Despite the positive effects of the waste legislation, the EU continues to provide excessive support to private operators, notably through PPPs. This has the effect of undermining public sector provision, by making PPPs more attractive. The ways in which the EU is supporting PPPs, and the problems created by PPPs in general, are set out in a recent PSIRU briefing for EPSU, available at <http://www.epsu.org/a/8193> . The development banks are particular offenders in this respect, with the EBRD continuing to state in 2012 that in municipal and environmental services “the development of PPPs will remain an aim in all EBRD countries of operations”, despite the known problems of PPPs in this and other sectors. [[26]](#endnote-26)

## Commercial waste

Household waste, which constitutes only 8% of total waste generated. The rest is generated by industrial activities, mostly by construction (33%), mining (28%), and manufacturing (13%). The private waste companies have increasingly sought to exploit this industrial and commercial market, as well as win contracts for municipal waste.

This has led to recent problems as the commercial waste market has declined (see above under Biffa and Van Gansewinkel).



### Exporting technology and importing toxic waste

Waste management companies are seeking business outside the EU, supported and financed by governments. For example, the German government set up the German RETech Partnership in 2011 to promote such business. This is supported by public development funds, including EU finance for twinning with countries in the eastern neighbourhood. [[27]](#endnote-27)

But there was strong opposition to a proposal by GIZ, the German development agency, to bring 350 tonnes of toxic waste from the Dow Chemical plant in Bhopal, India, to an incineration plant in Germany. GIZ has offered aid to finance the process, and German waste management companies would gain lucrative contracts, worth as much as 1.5 million euros for the first shipment.

Environmental groups argued that accepting the cargo would set a precedent, triggering a kind of toxic waste tourism to Germany. The environmental groups insisted that the toxic waste needs to be disposed of in the country of origin: a Greenpeace expert stated that: "We do not want highly toxic substances being shipped halfway around the world". Both Indian and German environmentalists said that the waste can and should be processed locally: the necessary incineration plant should be built in India and the cost of processing the waste should be borne by Dow Chemical. [[28]](#endnote-28)

The opposition was successfuI. In September 2012 GIZ pulled out of the project, terming the assignment "too hazardous" and citing "negative publicity" in the German media.[[29]](#endnote-29)

### Private companies insourcing

The Ademe report on France in 2010 notes that private businesses are insourcing more recycling work: “businesses are becoming increasingly interested in waste management: some tasks previously carried out by contractors are now done in-house, and they have begun to consider managing their own waste independently. The soaring price of recyclable materials before the start of the economic crisis, particularly in respect of metals, has provoked this kind of thinking.” [[30]](#endnote-30)

In August 2012 this was one of the factors that led to a crisis at Biffa in the UK. Biffa had failed to adjust to the decline in the industrial waste collection business, and to the trend for major companies to prefer inhouse operation of their own waste services:

 “it is particularly vulnerable in the new environment as it is reliant on industrial waste, which accounts for 80 per cent of earnings…... the downturn in consumer spending has reduced waste volumes. Further compounding the problem has been a growing trend for big companies, such as Tesco, to deal with their own waste. …The industrial collection business is collapsing …Analysts say the industry, much of which is private-equity owned and debt laden after a series of highly priced sell-offs between 2004 and 2007, underestimated the impact of the new EU directive and failed to invest in recycling technologies such as incinerators or anaerobic digesters.“

As a result, the private equity firm which owns Biffa, Montagu PE, is trying to sell it. This will create pressures for other Biffa employees working in municipal waste services. [[31]](#endnote-31)

### Incineration expansion for private sector work

Private companies promote incineration of household waste as it provides profitable opportunities on long-term contracts. They are now also seeking to use incineration to process commercial waste, and trying to get economies of scale by using the same incinerators for both types of waste.

Covanta, a USA waste-to-energy company, has encouraged municipalities in the UK to develop strategies which would support incineration facilities that process industrial and commercial waste as well as household waste. Covanta argues that companies still send much waste to landfill which could be diverted to incineration. [[32]](#endnote-32) In June 2012 Covanta also signed a national recognition agreement with the GMB union in the UK providing for consultation with the GMB on all projects at the development stage, over environmental as well as economic and safety issues, and collective bargaining rights when sites are operating. [[33]](#endnote-33)

# Bibliography and links

## EU level

European Commission DG Environment: waste <http://ec.europa.eu/environment/waste/index.htm>

EU legislation on Waste management <http://europa.eu/legislation_summaries/environment/waste_management/index_en.htm>

Eurostat Europe in figures - Eurostat yearbook 2011: Environment (tables and graphs) <http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/CH_11_2011_XLS/EN/CH_11_2011_XLS-EN.XLS>

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[France: Agence de l'Environnement et de la Maîtrise de l'Energie (déchets)](http://www2.ademe.fr/servlet/KBaseShow?sort=-1&cid=96&m=3&catid=12614)

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## Italy

Municipal waste management in Italy 2010 Antonio MASSARUTTO CIRIEC N° 2010/01

<http://www.ciriec.ulg.ac.be/fr/telechargements/WORKING_PAPERS/WP10-01.pdf>

## Belgium

COLLIGNON A./GATHON H.-J. 2010 Ciriec **WP10/09** [Les déchets en Belgique](http://www.ciriec.ulg.ac.be/fr/telechargements/WORKING_PAPERS/WP10-09.pdf)

## Austria

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# Annex A: Presence and employment of multinationals by country

1. Waste Management Multinationals in Europe 2012 (with subsidiaries and employment figures)

NOTE: Covers largest 15 multinationals operating in Europe. Each entry includes: 1. Parent company (in short form), 2. Local company (if different name) 3. Number of employees in waste management (if available). Countries in italics have no known subsidiaries of major 15 multinationals

| **Country** | **Veolia** | **Suez** | **FCC** | **Remondis** | **Van Gansewinkel** | **Other** |
| --- | --- | --- | --- | --- | --- | --- |
| Albania |   |   |   |   |   |   |
| Armenia |   |   |   |   |   |   |
| **Austria** |  |  | FCC (.A.S.A. - 600) | Remondis |  |  |
| **Azerbaijan** |  |  |  |  |  | CNIM  |
| Belarus |   |   |   |  Remondis |   |   |
| **Belgium** |  | Suez (SITA -2,500) |  | Remondis | van Gansewinkel  | Shanks (1,135), Indaver (659) |
| **Bosnia and Herzegovina** |  |  | FCC (.A.S.A.) |  |  | Alba |
| **Bulgaria** |  |  | FCC (.A.S.A. -600) | Remondis |  |  |
| **Croatia** |  |  | FCC (.A.S.A.) |  |  |  |
| *Cyprus* |  |  |  |  |  |  |
| **Czech Republic** | Veolia (Marius Pedersen - 2,390) |  Suez (SITA -1,000) | FCC (.A.S.A CZ -1,632) | Remondis | van Gansewinkel  |  |
| **Denmark** | Veolia (Marius Pedersen - 958) |  |  |  |  | Ragn-Sells  |
| **Estonia** | Veolia |  |  | Remondis (Buchen) |  | Ragn-Sells |
| **Finland** |  | Suez (SITA- 400) |  |  |  | Lassila & Tikanoja (L & T - 7,381) |
| **France** | Veolia (23,224) | Suez (SITA) |  | Remondis  | van Gansewinkel | Seche Env (1,560), CNIM, Urbaser, Shanks |
| Georgia |   |   |  |   |   |   |
| **Germany** | Veolia (9,903) | Suez (SITA - 3,094) |  | Remondis  | van Gansewinkel  | Alba, Indaver (534) |
| **Greece** |  |  |  |  |  | Urbaser (Waste Syclo) |
| **Hungary** | Veolia (Sarpi Dorog - 72) | Suez (SITA) | FCC (.A.S.A.) |  | van Gansewinkel  |  |
| *Iceland* |  |  |  |  |  |  |
| **Ireland** | Veolia (999) | Suez (SITA) |  |  | van Gansewinkel  | Indaver (165) |
| **Italy** | Veolia (329) |  | FCC | Remondis |  | Urbaser, Indaver (6), CNIM (Energonut) |
| *Kazakhstan* |  |  |  |  |  |  |
| *Kyrgyzstan* |  |  |  |  |  |  |
| **Latvia** | Veolia (150) |  |  |  |  | Lassila & Tikanoja (L&T -895), Ragn-Sells |
| **Lithuania** | Veolia  |  |  |  |  |  |
| Luxembourg |  |  |  |  | Van Gansewinkel |  |
| **Macedonia** |   |   | FCC (.A.S.A.) |   |   |   |
| *Malta* |  |  |  |  |  |  |
| *Moldova* |  |  |  |  |  |  |
| **Montenegro** |  |  | FCC (.A.S.A.)  |  |  |  |
| **Netherlands** |  | Suez (SITA -2,200) |  | Remondis | van Gansewinkel (3,943) | Shanks (2072), Indaver (DELTA - 290) |
| **Norway** |  |  |  |  |  | Ragn-Sell (300) |
| **Poland** | Veolia  | Suez (2,600) | FCC (.A.S.A. - 400) | Remondis  | van Gansewinkel | Alba (1000), Ragn-Sells |
| **Portugal** |  |  | FCC |  | van Gansewinkel  | Urbaser (Suma -3,099), Cespa, Indaver |
| **Romania** |  |  | FCC (.A.S.A -171)  | Remondis |  |  |
| **Russia** |  |  | FCC (.A.S.A.) | Remondis |  | Lassila & Tikanoja (L&T - 243) , CNIM |
| **Serbia** |  |  | FCC (.A.S.A - 100) |  |  |  |
| **Slovakia** | Veolia (Marius Pedersen) | Suez (SITA)  | FCC (.A.S.A. - 500) |  |  | Alba |
| **Slovenia** |  |  | FCC (.A.S.A.) |  |  |  |
| **Spain** |  |  | FCC | Remondis |  | Urbaser (23,361), Cespa (14,959) |
| **Sweden** |  | Suez (SITA - 1100) |  |  |  | Ragn-Sells (1700), Lassila & Tikanoja (L&T - 838) |
| **Switzerland** | Veolia (360) |  |  | Remondis |  |  |
| *Tajikistan* |  |  |  |  |  |  |
| *Tunisia* |  |  |  |  |  |  |
| **Turkey** |  |  |  | Remondis |  |  |
| *Turkmenistan* |  |  |  |  |  |  |
| **Ukraine** | Veolia  |  | FCC(.A.S.A.)  | Remondis |  |  |
| **United Kingdom** | Veolia (12,158) | Suez (SITA - 6,000) | FCC (2,400) | Remondis | van Gansewinkel | Shanks (857), Biffa, CNIM (17),Cespa (AmeyCespa),Urbaser, Indaver |
| *Uzbekistan* |  |  |  |  |  |  |

# Annex B: EU laws and court decisions

## Summary of EU legislation on waste

<http://europa.eu/legislation_summaries/environment/waste_management/index_en.htm> .

Details of each piece of legislation can be found by following the links from this web page.

 GENERAL FRAMEWORK

* [Directive on waste](http://europa.eu/legislation_summaries/environment/waste_management/ev0010_en.htm)
* [Waste management statistics](http://europa.eu/legislation_summaries/environment/waste_management/l28082_en.htm)
* [Landfill of waste](http://europa.eu/legislation_summaries/environment/waste_management/l21208_en.htm)
* [Waste incineration](http://europa.eu/legislation_summaries/environment/waste_management/l28072_en.htm)
* [Shipments of waste](http://europa.eu/legislation_summaries/environment/waste_management/l11022_en.htm)
* [Strategy on the prevention and recycling of waste](http://europa.eu/legislation_summaries/environment/waste_management/l28168_en.htm)
* [The management of bio-waste in the European Union](http://europa.eu/legislation_summaries/environment/waste_management/ev0009_en.htm)

 HAZARDOUS WASTE

* [Basel Convention](http://europa.eu/legislation_summaries/environment/waste_management/l28043_en.htm)
* [Controlled management of hazardous waste (until the end of 2010)](http://europa.eu/legislation_summaries/environment/waste_management/l21199_en.htm)Archives

 WASTE FROM CONSUMER GOODS

* [Packaging and packaging waste](http://europa.eu/legislation_summaries/environment/waste_management/l21207_en.htm)
* [Disposal of polychlorinated biphenyls (PCBs) and polychlorinated terphenyls (PCTs)](http://europa.eu/legislation_summaries/environment/waste_management/l21201_en.htm)
* [Disposal of spent batteries and accumulators](http://europa.eu/legislation_summaries/environment/waste_management/l21202_en.htm)
* [End-of-life vehicles](http://europa.eu/legislation_summaries/environment/waste_management/l21225_en.htm)
* [The reusing, recycling and recovering of motor vehicles](http://europa.eu/legislation_summaries/environment/waste_management/n26102_en.htm)
* [Waste electrical and electronic equipment](http://europa.eu/legislation_summaries/environment/waste_management/l21210_en.htm)
* [Substances subject to restrictions for use in electrical and electronic equipment](http://europa.eu/legislation_summaries/environment/waste_management/ev0031_en.htm)

 WASTE FROM SPECIFIC ACTIVITIES

* [Industrial emissions](http://europa.eu/legislation_summaries/environment/waste_management/ev0027_en.htm)
* [Integrated pollution prevention and control (until 2013)](http://europa.eu/legislation_summaries/environment/waste_management/l28045_en.htm)
* [Management of waste from extractive industries](http://europa.eu/legislation_summaries/environment/waste_management/l28134_en.htm)
* [A strategy for better ship dismantling practices](http://europa.eu/legislation_summaries/environment/waste_management/ev0011_en.htm)
* [Removal and disposal of disused offshore oil and gas installations](http://europa.eu/legislation_summaries/environment/waste_management/l28053_en.htm)
* [Use of sewage sludge in agriculture](http://europa.eu/legislation_summaries/environment/waste_management/l28088_en.htm)
* [Port facilities for ship-generated waste and cargo residues](http://europa.eu/legislation_summaries/environment/waste_management/l24199_en.htm)
* Titanium dioxide
	+ [Disposal of titanium dioxide industrial waste](http://europa.eu/legislation_summaries/environment/waste_management/l21203_en.htm)
	+ [Surveillance and monitoring of titanium dioxide waste](http://europa.eu/legislation_summaries/environment/waste_management/l21204_en.htm)
	+ [Reduction of pollution caused by waste from the titanium dioxide industry](http://europa.eu/legislation_summaries/environment/waste_management/l21205_en.htm)

 RADIOACTIVE WASTE AND SUBSTANCES

* [Shipments of radioactive waste: supervision and control](http://europa.eu/legislation_summaries/environment/waste_management/l11020_en.htm)
* [Shipments of radioactive substances](http://europa.eu/legislation_summaries/environment/waste_management/l28099_en.htm)
* [Situation in 1999 and prospects for radioactive waste management](http://europa.eu/legislation_summaries/environment/waste_management/l28097_en.htm)
* [Management of spent fuel and radioactive waste](http://europa.eu/legislation_summaries/environment/waste_management/en0027_en.htm)

## Waste Framework Directive ([2008/98/EC](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32008L0098:EN:NOT))

The directive applies from December 2008, and has to be implemented in national legislation by December 2010.

Waste is defined simply:

Article 3 (1): “‘waste’ means any substance or object which the holder discards or intends or is required to discard”

Member States have to take measures for the treatment of their waste in line with a clear hierarchy:

Article 4: “The following waste hierarchy shall apply as a priority order in waste prevention and management legislation and policy:

(a) prevention;

(b) preparing for re-use;

(c) recycling;

(d) other recovery, e.g. energy recovery; and

(e) disposal.”[[34]](#endnote-34)

The principle of recycling and re-use is applied to exclude industrial by-products from the definition of waste as long as it meets criteria for re-use:

Article 5: “A substance or object, resulting from a production process, the primary aim of which is not the production of that item, may be regarded as not being waste ...but as being a by-product only if the following conditions are met:

(a) further use of the substance or object is certain;

(b) the substance or object can be used directly without any

further processing other than normal industrial practice;

(c) the substance or object is produced as an integral part of a

production process; and

(d) further use is lawful.”

The same principle is used to define when recycling and recovery of specific forms of waste has been achieved. Regulations will define the ‘end-of-waste’ criteria for specific forms of waste, including paper, glass, metal, tyres and textiles, based on general criteria for re-use:

Article 6: “Certain specified waste shall cease to be waste .... when it has undergone a recovery, including recycling, operation and complies with specific criteria to be developed in accordance with the following conditions:

(a) the substance or object is commonly used for specific purposes;

(b) a market or demand exists for such a substance or object;

(c) the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and

(d) the use of the substance or object will not lead to overall adverse environmental or human health impacts...

...End-of-waste specific criteria should be considered, among others, at least for aggregates, paper, glass, metal, tyres and textiles.”

Governments have to take measures to enable recovery and re-use, including separate collection:

Article 10: “Recovery:

1. Member States shall take the necessary measures to ensure that waste undergoes recovery operations, in accordance with Articles 4 and 13.

2. Where necessary to comply with paragraph 1 and to facilitate or improve recovery, waste shall be collected separately if technically, environmentally and economically practicable and shall not be mixed with other waste or other material with different properties.”

Article 11: “Re-use and recycling

1. Member States shall take measures, as appropriate, to promote the re-use of products and preparing for re-use activities, notably by encouraging the establishment and support of re-use and repair networks, the use of economic instruments, procurement criteria, quantitative objectives or other measures. Member States shall take measures to promote high quality recycling and, to this end, shall set up separate collections of waste where technically, environmentally and economically practicable and appropriate to meet the necessary quality standards for the relevant recycling sectors. Subject to Article 10(2), by 2015 separate collection shall be set up for at least the following: paper, metal, plastic and glass.” [[35]](#endnote-35)

National governments have to achieve re-use and recycling of 50 percent of waste materials from households, and 70 percent of non-hazardous construction and demolition waste:

Article 11: “2. In order to comply with the objectives of this Directive, and move towards a European recycling society with a high level of resource efficiency, Member States shall take the necessary measures designed to achieve the following targets:

1. by 2020, the preparing for re-use and the recycling of waste materials such as at least paper, metal, plastic and glass from households and possibly from other origins as far as these waste streams are similar to waste from households, shall be increased to a minimum of overall 50 % by weight”
2. by 2020, the preparing for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials, of non-hazardous construction and demolition waste excluding naturally occurring material defined in category 17 05 04 in the list of waste shall be increased to a minimum of 70 % by weight.”[[36]](#endnote-36)

The costs of all this are expected to be met by the producers, distributors or final users of the original waste product, and that they are responsible for arranging treatment of waste.

Article 14: “In accordance with the polluter-pays principle, the costs of waste management shall be borne by the original waste producer or by the current or previous waste holders.....”

Article 15: “Member States shall take the necessary measures to ensure that any original waste producer or other holder carries out the treatment of waste himself or has the treatment handled by a dealer or an establishment or undertaking which carries out waste treatment operations or arranged by a private or public waste collector...”

In order to reduce trans-border shipments of waste out of the EU and between member states of the EU, member states are obliged to co-operate to create a network of disposal and recovery facilities so that the EU as a whole will be self-sufficient in dealing with its own waste, and member states can also move towards self-sufficiency, and waste is processed as close as possible to its origins.

Article 16: Principles of self-sufficiency and proximity.

“1. Member States shall take appropriate measures, in cooperation with other Member States where this is necessary or advisable, to establish an integrated and adequate network of waste disposal installations and of installations for the recovery of mixed municipal waste collected from private households.....

2. The network shall be designed to enable the Community as a whole to become self-sufficient in waste disposal as well as in the recovery of waste referred to in paragraph 1, and to enable Member States to move towards that aim individually.....

3. The network shall enable waste to be disposed of or waste referred to in paragraph 1 to be recovered in one of the nearest appropriate installations, by means of the most appropriate methods and technologies...”

Member states are obliged to develop waste management (and waste prevention) programmes covering the entire country. These plans have to include a comprehensive analysis of all waste streams, existing systems for collection, recovery and disposal, an assessment of the need for new facilities (in the framework of the EU-wide network required in article 16). Waste prevention programmes also have to be produced by the end of 2013, identifying specific measures for preventing waste.

Article 28: “1. Member States shall ensure that their competent authorities establish...one or more waste management plans. Those plans shall, alone or in combination, cover the entire geographical territory of the Member State concerned.

2. The waste management plans shall set out an analysis of the current waste management situation in the geographical entity concerned, as well as the measures to be taken to improve environmentally sound preparing for re-use, recycling, recovery and disposal of waste and an evaluation of how the plan will support the implementation of the objectives and provisions of this Directive.”

Article 29: “Member States shall establish....waste prevention programmes not later than 12 December 2013.”

The European Commission brings infringement proceedings at the European Court of Justice against countries failing to develop and implement waste management plans (see below section 3.1).

### Classification of waste incineration

The revised WFD defines recovery so that the incineration for energy can qualify as long as another energy source is replaced somewhere in the wider economy, and as long as it reaches a certain level of energy efficiency:

Article 3: “15..."recovery" means any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy.”

Annex II: Recovery operations: “R1 Use principally as a fuel or other means to generate energy”[[37]](#endnote-37)

The distinction remains uncertain in relation to hazardous waste incinerators. [[38]](#endnote-38)

## Landfill directive (1999/31/EC)

The EU's obliges member states to reduce the amount of municipal solid waste in landfill by 65% by 2016 compared to 1995 levels. But it does not give countries binding specifications on what to do with it: a situation that has led most member states to opt for incineration.

Recycling and generation of secondary materials involves extra stages of work (production chains) on municipal waste, which implies more employment, and also a change in types of employment. The TNO report states:

“employment has increased in the prevention and recycling industry and decreased in landfilling. In the UK, for instance, employment in recycling increases yearly with 7%, while employment in waste disposal decreases with 5%. In total a small increase of 1-2% is seen (Skills for Business, 2006). Furthermore, this change might influence skills needed in the waste sector. According to Skills for Business (2006, p. 23) substitution towards recycling affects all occupations, but particularly machine operators and drivers. Increases in incineration and other dedicated treatment plants ask also for special labour skills.”

1. Recycling, separate collection and sorting

|  |  |
| --- | --- |
|  |  |

Source: [Landfill: Waste or Raw Material Source -Thomas Probst, bvse](http://www.ceep.eu/images/stories/pdf/events/16072009/thomas-probst.pdf) <http://www.ceep.eu/images/stories/pdf/events/16072009/thomas-probst.pdf>

## Environmental laws: infringement proceedings (failure to implement laws)

20% of all infringement proceedings by the EC against member states concern environmental issues, and 19% of these concern the waste management sector.[[39]](#endnote-39) Infringement proceedings are not very effective. The Commission does not even have a unit dedicated to waste, there is only one person in charge of the Landfill Directive, and ECJ judgments can take up to six years.  In 2012 the Commission finally settled its case against Italy by accepting a new waste management plan for the Lazio region. [[40]](#endnote-40)

## Other EU law: procurement and state aid

### Hamburg and inter-municipal waste service

On 09 June 2009, the European Court of Justice decided that local authorities are allowed to cooperate using each other’s resources without applying the EU public procurement directives. The decided case dealt with the disposal of waste by neighbouring local authorities at an incinerator owned by the city of Hamburg, Germany, under a cooperation agreement between the public authorities (Case C‑480/06). The court ruled that:

“a public authority has the possibility of performing the public interest tasks conferred on it by using its own resources, without being obliged to call on outside entities not forming part of its own departments, and that it may do so in cooperation with other public authorities (see *Coditel Brabant*, paragraphs 48 and 49).....”

“Community law does not require public authorities to use any particular legal form in order to carry out jointly their public service tasks” (such as a specially created and jointly owned company)

and that “such cooperation between public authorities does not undermine the principal objective of the Community rules on public procurement, that is, the free movement of services and the opening-up of undistorted competition in all the Member States , where implementation of that cooperation is governed solely by considerations and requirements relating to the pursuit of objectives in the public interest”. [[41]](#endnote-41)

The decision has been very important in legitimising the use of inter-municipal organisations to provide waste and other public services.[[42]](#endnote-42)

### Italy re state aid

In Case T‑222/04, the ECJ upheld a commission ruling that Italy was in breach of the state aid rules by granting of tax reliefs and loans at preferential rates to a group of local authority companies providing public services including water, gas, electricity and waste management (including ACEA (Rome), AEM Milan) and AMGA (Genoa). [[43]](#endnote-43)

# Notes

1. <http://www.finance.veolia.com/docs/3-Rapport-Gestion-062012-version-mise-en-ligne.pdf> [↑](#endnote-ref-1)
2. La Tribune.fr Jeudi 19 Juillet 2012 Veolia cède une de ses filiales américaines pour 1,55 milliard d'euros [↑](#endnote-ref-2)
3. Pages de Presentation-Investor-Day-2011-proprete-en.pdf <http://www.finance.veolia.com/docs/Pages%20de%20Presentation-Investor-Day-2011-proprete.pdf> [↑](#endnote-ref-3)
4. Suez Doc de Reference 2009 <http://www.suez-environnement.com/document/?f=profile/en/ddr_se_2009_en.pdf> [↑](#endnote-ref-4)
5. <http://www.suez-environnement.com/wp-content/uploads/2012/08/SE_H1-2012_VA_DEF2_WEB.pdf> [↑](#endnote-ref-5)
6. Remondis Aktuell 3/2011 <http://www.remondis.com/uploads/tx_3spdfs/RA_3_11_EN_Online_04.pdf> [↑](#endnote-ref-6)
7. Van Gansewinkel AR 2011 <http://www.vangansewinkelgroep.com/library/VGWG_UK_Annual_report-2011_web.pdf> [↑](#endnote-ref-7)
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|  |  |  |  |
| --- | --- | --- | --- |
|  | France 2009 | UK 2010 | *UK 2010* |
|  |  (€billion Euros) | (€billion Euros) |  *(£ billion GBP)* |
| Municipal waste and street cleaning | 9.1 | 8.8 | *7.5* |
| Per cent of GDP | 0.5% | 0.5% |  |
| Industrial waste | 4.6 | 3.9 | *3.3* |
| Household | 0.3 | - | *-* |
| TOTAL | 14 | 12.7 | *10.8* |
| Per cent of GDP | 0.75% | *0.74%* | *0.74%* |

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37. “[\*] This includes incineration facilities dedicated to the processing of municipal solid waste only where their energy efficiency is equal to or above:

- 0,60 for installations in operation and permitted in accordance with applicable Community legislation before 1 January 2009,

- 0,65 for installations permitted after 31 December 2008,using the following formula:Energy efficiency = (Ep - (Ef + Ei))/(0,97 × (Ew + Ef))In which:

- Ep means annual energy produced as heat or electricity. It is calculated with energy in the form of electricity being multiplied by 2,6 and heat produced for commercial use multiplied by 1,1 (GJ/year)

- Ef means annual energy input to the system from fuels contributing to the production of steam (GJ/year)

- Ew means annual energy contained in the treated waste calculated using the net calorific value of the waste (GJ/year)

- Ei means annual energy imported excluding Ew and Ef (GJ/year)

- 0,97 is a factor accounting for energy losses due to bottom ash and radiation.This formula shall be applied in accordance with the reference document on Best Available Techniques for waste incineration.” [↑](#endnote-ref-37)
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