

Mapping The UK Environmental Goods and Services Sector:

The Environmental Industry Unit's Analysis of the Sector in 2004 in conjunction with the English RDAs and Devolved Administrations

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SUMMARY:

In August 2004, the newly established Defra/DTI Environmental Industries Unit undertook a follow-up study of the environmental goods and services sector (EGS). The principal aim was to identify the current size of the UK sector (number of employees/firms, annual turnover) and compare with a previous study carried out in 2002.

This previous study¹ estimated that the UK sector was worth £16 billion and was responsible for 170,000 jobs in 7000 companies.

A questionnaire was sent to all members of the UK Forum for the Environmental Industries (UKFEI), asking for their most recent mapping data for this sector. UKFEI was chosen as the most appropriate sample base because its membership comprises all English RDA regions, and the Devolved Administrations.

Although the data collected in 2002 and 2004 is not strictly comparable², the overall trend is positive. The key conclusions for the EGS sector are:

- that we estimate it had an estimated annual turnover of over £25 billion in 2004, and is growing;
- it now employs around 400,000 people in the UK;
- over 17,000 companies identify themselves as operating in the sector; and
- this puts the EGS sector on a par with aerospace and defence.

Methodology:

EIU sent out the questionnaire in August 2004, asking UKFEI members to use their most recent mapping data for this sector. All regions had undertaken some sector mapping exercises since the previous study, mainly in 2002 and 2003, so all financial data was revalued at 2004 prices³.

This paper concentrates on the economic results from the questionnaire, but full summary details covering the whole survey are contained in Annex A.

A summary table of the main economic results (see Table 1) was then re-circulated to UKFEI members for them to check and confirm the data. In particular, the East of England, the South East and North East have confirmed that their figures may be an underestimate of the size of the sector. The figures for London are more detailed than other regions, and do include a proportion of public sector employees, such as central government, local authority (including refuse collectors and environmental health officers) and academics teaching environmental subjects. This subset of the sector accounts for approximately 19%, therefore, the figures for London have been revised down from 140,000 to 113,000 employees. We have not revised down the number of companies and turnover for London as (i) there are only a small number of possible employers of this

¹ Global Environmental Markets and the UK Environmental Industry- Opportunities to 2010 report, which was carried out for JEMU by ERM in 2002, using figures assembled in November and December 2001.

² The 2002 study was based on the JEMU database of EGS companies at the time, with some scaling up where there was no more up to date information.

³ Revalued using Treasury standard revaluation tables. Revalued figures account for a 0.1% difference against reported figures

sub-sector (as most will be in the public sector), and (ii) they are likely to be at the lower end of the turnover/earnings scale (being public sector).

It is noticeable that the average number of employees per company in London is still significantly higher than elsewhere in the UK (with an average of 47), compared with a UK average of 24. The questionnaire did not ask for detailed data to enable us to explain this difference from the rest of the UK. However, there may be a number of reasons, such as:

Larger companies (who operate a proportion of their core business in the EGS sector) might be based in London. This may cover a number of London based consultancy firms.

Some companies will have their headquarters in London, and the figures may include corporate services such as personnel and finance.

It is also noticeable that the North West region also has an average of number of employees per company of 35, which is also above the UK (and England) average. Further analysis as to why London and North West differs may be required here (see Way Forward section below).

Analysis of the results

Table 1 below summarizes the key economic data from the questionnaire.

Region	No. of Employees	No. of Comps	Annual Turnover £	Av turnover gen per job created	Average turnover per company	Av no. of employees per company
West Midlands	29,000	1,600	£1,500,000,000	£51,724	£937,500	18
East of England	48,025	2,139	£7,200,000,000	£149,922	£3,366,059	22
Southwest	30,000	1,325	£1,587,270,000	£52,909	£1,197,940	23
South East	25,000	1,200	£4,625,505,000	£185,020	£3,854,588	21
North West	53,000	1,500	£2,700,000,000	£50,943	£1,800,000	35
London*	113,000	2,404	£3,818,496,000	£33,792	£1,588,393	47
North East	18,525	843	£693,250,000	£37,422	£822,361	22
East Midlands	20,100	911	£638,067,000	£31,745	£700,403	22
Yorks and Humb	29,260	1,854	£743,916,000	£25,424	£401,249	16
ENGLAND	365,910	13,776	£23,506,504,000	£68,767	£1,706,337	27
Scotland	7,700	833	£200,000,000	£25,974	£240,096	9
Wales	13,500	1,350	£580,000,000	£42,963	£429,630	10
NI	4,500	219	£180,000,000	£40,000	£821,918	21
TOTAL UK	391,610	16,178	£24,466,504,000	£61,277	£1,374,344	24
JEMU estimate**	170,000	7,000	£16,442,240,000	£96,719	£2,348,891	24

* see London note in main text
** Carried out in 2002

Accuracy of Data

Sector mapping:

There is a difficulty in defining such a cross-cutting sector (environmental technology can fall into engineering, construction and many other standard industry sectors so the boundary of the sector cannot be defined precisely. The 2004 questionnaire asked what definitions were used in the various mapping reports. Most regions reported using either the JEMU definitions un-modified or with slight changes. Only London and the North East did not use the JEMU definitions. Whilst we have adjusted the figures for London (see footnote 4, earlier), we have confirmed with the North East that they figures they

have supplied do in fact closely mirror the JEMU definitions (and are likely to be on the conservative side). Whilst some regions reported making slight regional amendments to the JEMU definitions, in this study we do not have sufficient data to see what difference that would make. Further analysis may be required here.

Industry definitions:

However, not all firms active in the EGS sector identify themselves as operating in this sector. This could be for a number of reasons: sometimes the EGS side is only a small part of their activities or it may be that some companies who have changed the end use of their products are simply not recognised as EGS activity (eg gearboxes for wind turbines, rather than automotive uses, are more likely to still be classified as engineering activity – especially under SIC codes).

Data anomalies:

The analysis has highlighted that the numbers of employees and turnover per company varies across the UK

There may have been some double counting of firms, particularly those with offices in more than one region (and who may each be reporting national – rather than regional – data for each regional study), or where they sit on the borders between regions.

Data lags:

Follow-up discussions with some respondents suggest that this is a fast growing sector, with new firms and technologies appearing all the time. This means any survey is likely to be out-of-date before it is fully analysed and published.

Comparison of EIU results with other data

Subsequent testing of the robustness of the results of the new data, support the figure of £25 billion for EGS turnover in 2004:

- DTI statisticians have calculated that turnover⁴ for the EGS sector in 2003 would have been a minimum of £21.5 billion (using a narrow SIC code definition⁵) and £36 billion (using a wider SIC code definition⁶). ONS returns for 2003 gave the waste sector (SIC code 90) a turnover figure of £14.6 billion in its own right.
- In addition, using reported turnover data from a recent EIU survey of EGS Trade Associations, even allowing for some basic refinement to reduce the risk of double counting (where associations' membership may overlap for certain sub-sectors), it is possible to estimate a sector size of nearly £27 billion in 2003/4.
- All of the regions reported growth in the sector since the 2002 study (which used data gathered in 2001), so it is reasonable that turnover in the sector should have risen from the £16 billion figure. However, the 2002 study predicted a UK market size of £18.6 billion by 2005⁷ (at a growth rate of 3.6% p.a.). Clearly our survey

⁴ Derived from GVA figures, revalued at 2004 prices, using Treasury Standard Revaluation Tables. GVA range is from £10bn to £15.5bn. DTI Statisticians estimated turnover based on industry average GVA/turnover ratios for each SIC sector

⁵ SIC codes: Recycling of metal waste and scrap (37.1), Recycling of non-metal waste and scrap (37.2), Collection, Purification and distribution of water (41), Demolition and wrecking of buildings; earth moving (45.11), Wholesale of waste and scrap (51.57), Sewage and refuse disposal, sanitation and similar activities (90)

⁶ SIC codes: As 5 plus Construction of civil engineering constructions (45.21/3), Construction of water projects (45.24), Plumbing (45.33), Other building completion (45.45)

⁷ At 2004 prices

results exceed the expected trend (as it would equate to a 20% p.a. rate of growth). A further test was carried out on data from the North East (who had carried out comparable studies in 2000 and 2001⁸). This showed a growth rate of 20% between 2000 and 2001. Unfortunately, it was not possible to carry out similar tests in other regions (as methodologies varied between years).

- However, one of the main reasons for this unexpectedly rapid growth may be RDA/DA understanding (and market information) has improved over the last two years. The 2002 study had identified 7000 EGS companies; in 2004 this had risen to 17,000. RDAs have been actively mapping the sector – and so identifying more companies in the field which had not been identified in previous studies, as well as many more companies re-classifying themselves as EGS as a result of diversification. This may have resulted in the improvement of the quality of analysis carried out by regions and the provision of more robust figures for the latest survey. The 2002 study also included estimates from some regions or extrapolations of previous results. This suggests that the 2002 study had underestimated the size of the EGS sector, rather than an overestimation in the 2004 study.

Way Forward/Next Steps

1. Understanding anomalies: Further analysis/exploration with RDAs/DAs would also be useful to help understand why the numbers of employees and turnover per company varies across the UK and whether this trend is reflected in other sectors of the economy. It would also be useful to see if there is any evidence of double counting in the figures.
2. Sector mapping: EIU will be working with the regions/DAs to identify better ways of defining the sector and produce guidance for future mapping studies to allow greater standardisation and comparability of data.
3. Industry definitions: EIU will encourage the regions/DAs to publicise the above guidance to their local companies (eg make available through the EIU website).
4. Further analysis: EIU will consider using these results and the survey to take forward a more refined analysis of the EGS sector. For example, comparing the data to other national economic measures (eg VAT registrations, GVA data, wider SIC code samples). EIU will also explore other – corroborative – sources of data (eg from Trade Associations and other published studies).

Conclusion

The EIU data seems to be robust and this report has identified a number of possible future work streams.

Both the 2002 and 2004 studies seem to back up the view that this is a dynamic and growing sector of the economy and most regions have recognised this and seem to be developing policies to identify and support the needs of the EGS sector (see Annex A for a detailed summary of the results of the survey).

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⁸ Turnover in the NE in 2000 was £519,650,000 and in 2001 it was £649,875,000