

Membership Employment Survey 2010



Part 3: Qualifications

The Institution of Environmental Sciences



[www.ies-uk.org.uk](http://www.ies-uk.org.uk)

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## About the authors

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## About the Institution

The Institution of Environmental Sciences (IES) is a charitable organisation which promotes and raises public awareness of environmental science by supporting professional scientists and academics working in this crucial arena. The Institution has strong ties with Higher Education and promotes and supports environmental science and sustainable development in universities and colleges both nationally and internationally. Further details can be found at [www.ies-uk.org.uk](http://www.ies-uk.org.uk)

## Acknowledgements

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## **Abstract**

In light of the current economic climate, the Institution of Environmental Sciences (IES) is seeking to understand the current employment situation within environmental sciences, including gender differences that may pervade. In August 2010, the IES surveyed a sample of its members; the survey questioned members about their current employment situation, academic history and use of their rights to parental leave. The results of this survey will be published throughout 2011 in a series of reports. This third report focuses on the impact of qualification choices on employment. In particular, it compares the impact of qualification levels, subjects and Chartership on employment status, sector, field, promotion and job security.

## Section 1 – Introduction and Method

With tuition fees rising yet again, it is inevitably questioned whether the costs of qualifications is now exceeding their value. It is vital that people beginning their career are able to make informed decisions regarding subject choices and qualification levels. These early decisions can determine which opportunities are available in the future, particularly in terms of the employment field, promotion, benefits and job security.

Looking beyond university, it is important for environmental science professionals to continue to maintain their qualifications. The Chartered Environmentalist (CEnv) designation was launched in 2004, enabling professionals to demonstrate their capability in this field, and their commitment to continuous professional development (CPD). It is crucial for professionals to understand the impact of Chartership on their career prospects to determine whether it is worthwhile pursuing this professional benchmark.

In accordance with its responsibility as a professional body the Institution of Environmental Sciences (IES) undertook research into the relationship between qualifications and the employment of its membership. In August 2010 the IES invited its Fellows, Full and Associate Members to take part in a survey regarding their previous qualifications and current employment situation. This report is the third in a series, dealing specifically with the impact of qualification choices on employment and promotion. All the reports can be downloaded from the Members' Area of the IES website ([www.ies-uk.org.uk](http://www.ies-uk.org.uk)). The aim of this report is to enable people pursuing careers in this field to making informed choices.

The first section of this report outlines the method of surveying the members, followed by the results relating to highest qualification levels, subject choices and Chartership status. From these results, conclusions and recommendations are drawn for the consideration by the IES Council and the membership.

### Survey method

A questionnaire was prepared through a survey website (SurveyMonkey.com) where Fellows, Full and Associate members could complete the questionnaire. Affiliate and Student members were not invited to complete the questionnaire as they are generally not currently employed in the field of environmental sciences.

Members were asked their member grade and their Chartered status, and were then asked to complete sections depending upon their employment status (employed, unemployed or retired). All respondents were asked about their education, age, gender, and details regarding their use of the right to parental leave.

Employed members were asked to provide details regarding their sector, field within environmental sciences, position within their organisation, salary, benefits and job security. Unemployed members were asked how long they had been seeking work and their confidence levels in finding work. Retired members were questioned about their sector and final salary and pension.

## Section 2 - Results

### Responses

The survey was completed by 423 members. This represents the view of over 40% of the membership invited to participate. The membership status of those who responded was as follows:

Member Grade	Percentage of Survey Respondents	Percentage of IES Membership
Fellows	3.8%	3.0%
Members	77.3%	78.5%
Associates	18.9%	18.5%

The survey respondents provide a representative sample of the Institution's membership.

### IES membership grades

Survey respondents were asked to specify the level of their highest degree, choosing between the following options: Higher National Certificate, Higher National Diploma, Bachelors, Postgraduate Certificate, Postgraduate Diploma, Masters, Doctorate, or to specify an alternative. These results were then divided by membership grade.

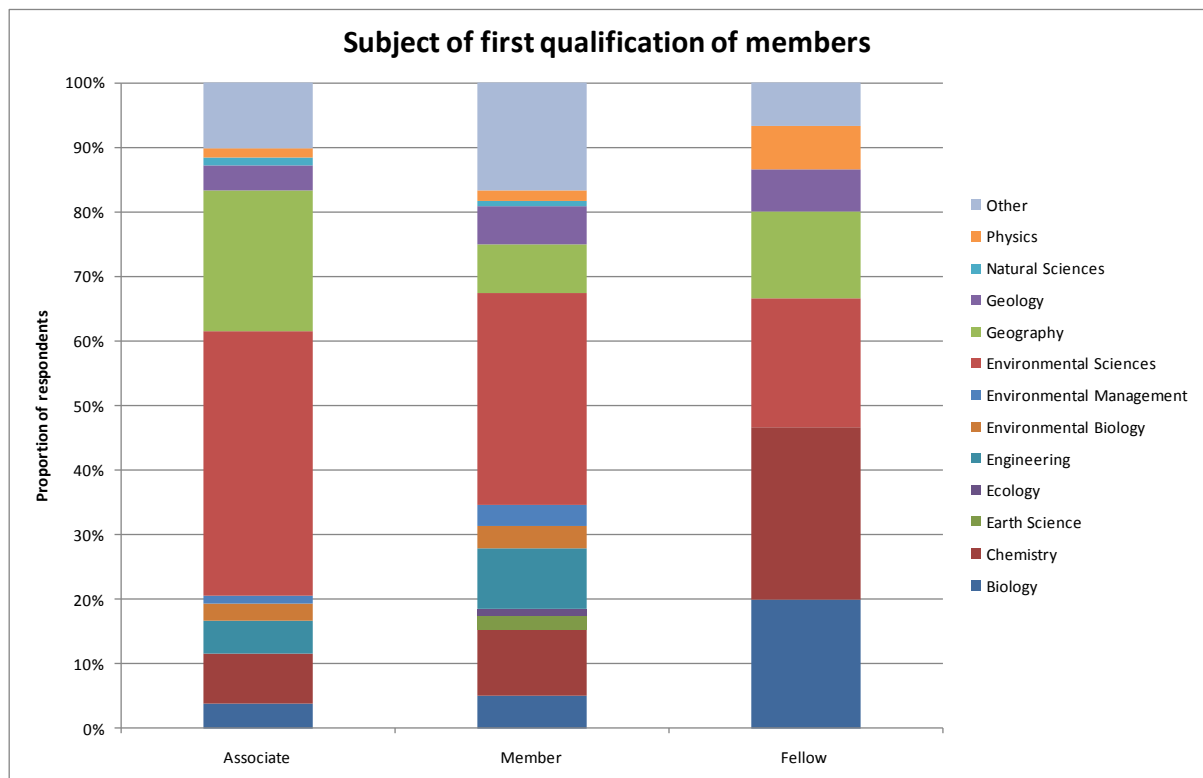


**Figure 1:** Graph showing the highest qualification held by members, divided by membership grade, at the time of answering the survey (August 2010). The qualification types are shown in an approximate representation of their level, going from lowest to highest (excluding 'other').

The majority of IES members (71.0%) hold a postgraduate qualification (Postgraduate Certificate, Postgraduate Diploma, Masters or Doctorate). The results indicate that those with a higher level of IES membership grade are more likely to hold a higher qualification level. The proportion of postgraduate level members is higher for Full Members and Fellows (73.7% and 73.3% respectively) than for Associates (60.3%).

Fellows only held one of three degree types as their highest degree: Doctorate (53.3%), Masters (20.0%) and Bachelors (26.7%). Associate Members were more likely to hold a Bachelors as their highest degree than Full Members (33.3% compared with 23.0%), though similar proportions of both grades held Masters level as their highest degree (47.4% and 47.7% respectively).

Survey respondents were also asked to identify the subject of their first degree, choosing from a selection of 'relevant degrees' to the field of environmental sciences, or providing an alternative. Figure 2 demonstrates how these results divided according by membership grade.



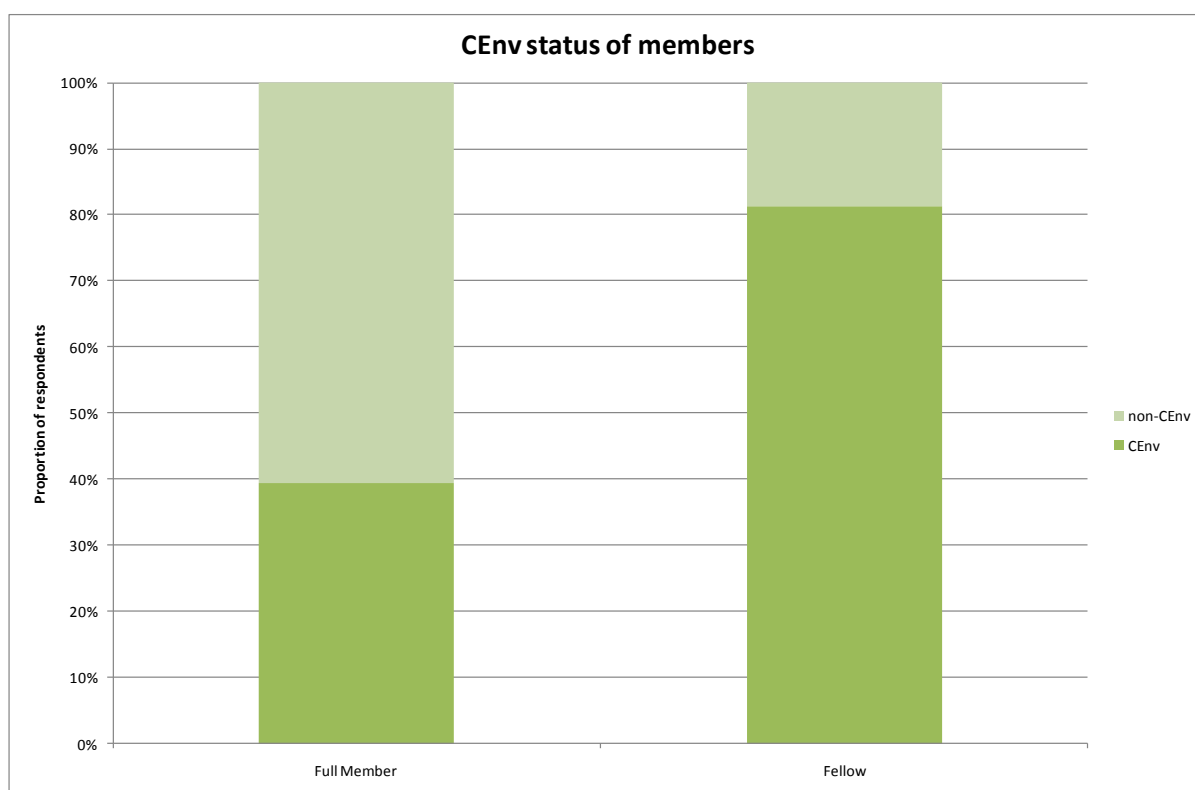
**Figure 2:** Graph showing the subject of first qualification held by members, divided by their membership grades, at the time of answering the survey (August 2010).

The most frequently studied first qualification subject was Environmental Sciences (34.0%), followed by Geography (10.6%) and Chemistry (10.3%). The least frequently selected subjects were Ecology and Natural Sciences (0.8% for both) and Natural Sciences and Physics (1.8% for both). Of all the respondents, 15.1% studied a subject that was not listed for their first degree.

All the subject options were represented by the results for the Full Members. No Associate Members studied Earth Sciences and Ecology. Only six subjects were studied by the Fellows, these tending to be more 'traditional' subjects. The dominance of Environmental Science was greater at the lower membership grades: 41.0% of Associate Members, 32.9% Full Members and only 20.0% of Fellows.

The second most frequently studied subject for Associate Members was Geography (21.8%), followed by Chemistry (7.7%) and Engineering (5.1%). In contrast with this, the proportion of Full Members who studied Chemistry or Engineering as their first qualification was greater than those who studied Geography (10.2% and 9.5% respectively, compared with 7.6%). The most frequently studied subject for Fellows was Chemistry (26.7%), followed by Biology and Environmental Sciences (both at 20.0%). Geography was studied by 13.3% of Fellows. Physics was more highly represented by Fellows than the other membership grades (6.7% of Fellows, compared with 1.6% Full Members and 1.3% Associates). Similarly Biology was only studied by 3.8% of Associates and 4.9% of Full Members, compared with a fifth of Fellows.

Respondents were asked whether they held Chartered Environmentalist (CEnv) status. Only Full Members and Fellows are eligible to apply for CEnv status, though not all choose to do so, as shown in Figure 3 below.



**Figure 3:** Graph showing the Chartership status of Full Members and Fellows, at the time of answering the survey (August 2010).



Of all the eligible members, 41.4% of respondents were CEnvs. There is however a large difference between Fellows and Full Members. Of all the Fellows 81.3% have become CEnvs, whereas only 39.4% of Full Members held chartered status at the time of answering the survey.

## Current employment status

Employed members were asked to specify their current employment status, the results of which were compared with highest degree levels.



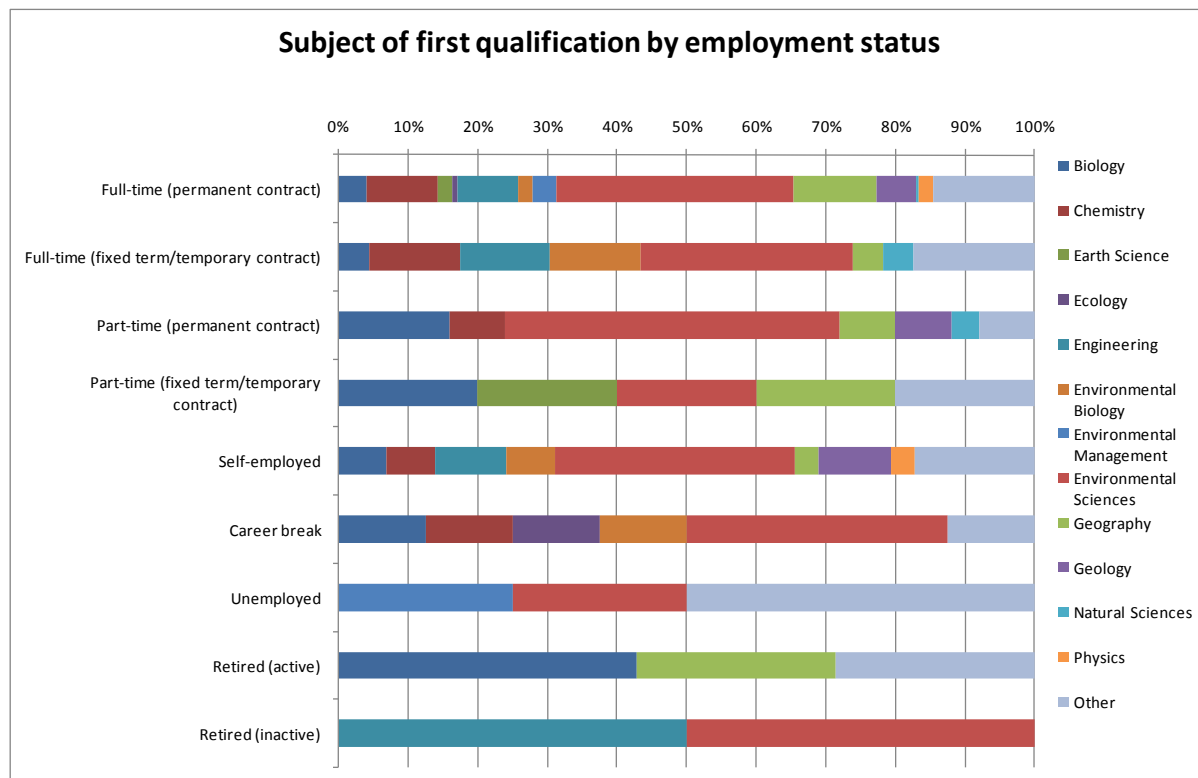
**Figure 4:** Graph showing the highest degree level of respondents compared with their employment status at the time of answering the survey (August 2010).

Almost half of all members held a Masters as their highest qualification (45.5%), followed by 25.7% with Bachelors and 17.0% held Doctorates. Proportionately more respondents on permanent contracts hold postgraduate level qualifications than those on temporary contracts. For example, 43.7% of respondents on permanent full-time contracts and 52.0% of those on permanent part-time contracts held Masters, compared with 13.3% and 20.0% temporary full-time and part-time contracts respectively. One third of those on temporary full-time contracts however held Doctorates. Only 25.0% of unemployed members held a Masters, whilst half the unemployed respondents held a Bachelors degree as their highest qualification.

All the retired members held postgraduate qualifications (except the 11.1% who selected 'other'), with 33.3% of these respondents holding a Doctorate. Of the self-employed

members, 72.4% held a postgraduate qualification (44.4% at Masters level, 33.3% Doctorate).

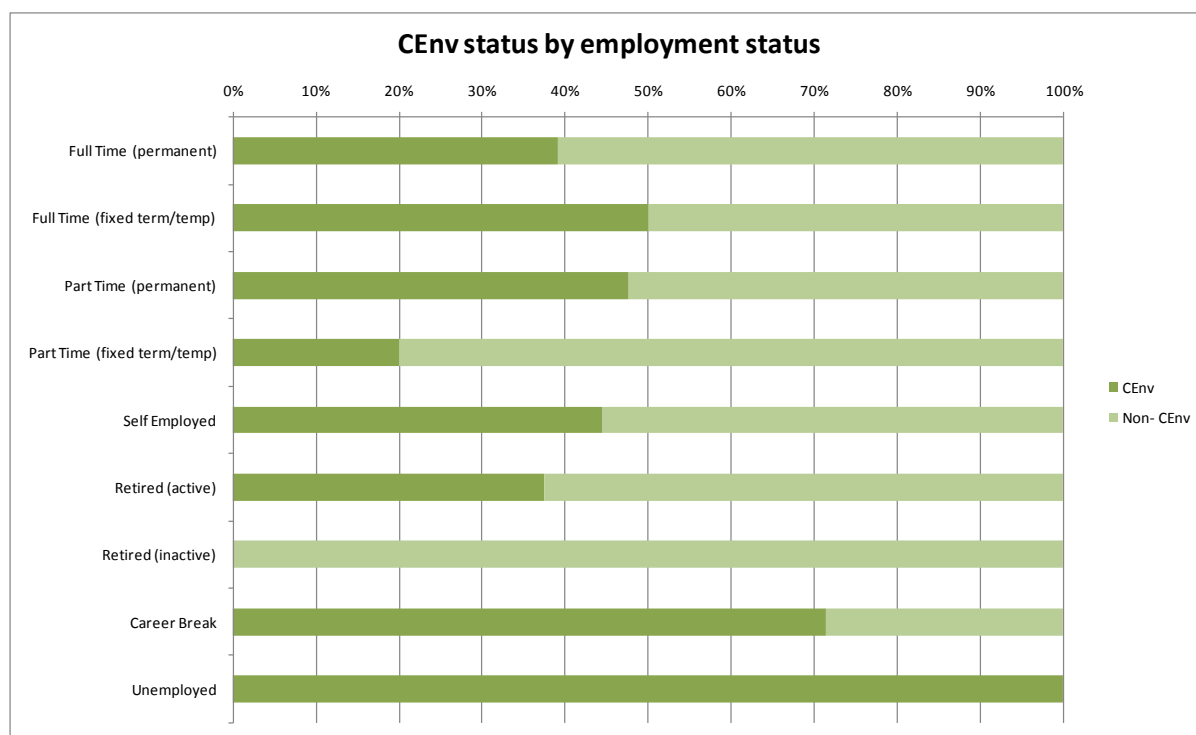
Employment status was also compared with the subject of respondents' first qualification.



**Figure 5:** Graph showing the subject of the first qualification of the IES membership compared with their employment status at the time of answering the survey (August 2010). Active and inactive refer to whether respondents remain active in the field of environmental sciences post-retirement.

Environmental Science was the most represented subject for most types of employment: 30.4% of permanent full-time members, 34.1% of temporary full-time members, 48.0% of permanent part-time contract, 34.5% self-employed and 37.5% of members on a career break. Of those retired member remaining active in environmental sciences, 42.9% studied Biology. Geography was most highly represented by members working on temporary part-time contracts or retired (active) (20.0% and 28.6% respectively). In contrast, Chemistry was proportionately highest amongst those working on temporary and permanent full-time contracts (13.0% and 10.2% respectively), and those on a career break (12.5%). Those who are self-employed were more likely to have qualified in environmental science (see above), or engineering or geology (both 10.3%).

The employment status of respondents was also compared with their CEnv status.



**Figure 6:** Graph showing the subject of CEnv status of respondents compared with their employment status at the time of answering the survey (August 2010).

There was little difference in the CEnv status of full-time and part-time members (39.9% and 42.3% respectively). Part-time members on a temporary contract were however less likely to be chartered than those on permanent contracts (20.0% compared with 47.6%). Of self-employed member 44.1% were chartered, whilst 71.4% on a career break were chartered. After temporary part-time contracts, retired members were least likely to be chartered. All of the eligible unemployed members (a total of three respondents) held Chartership.

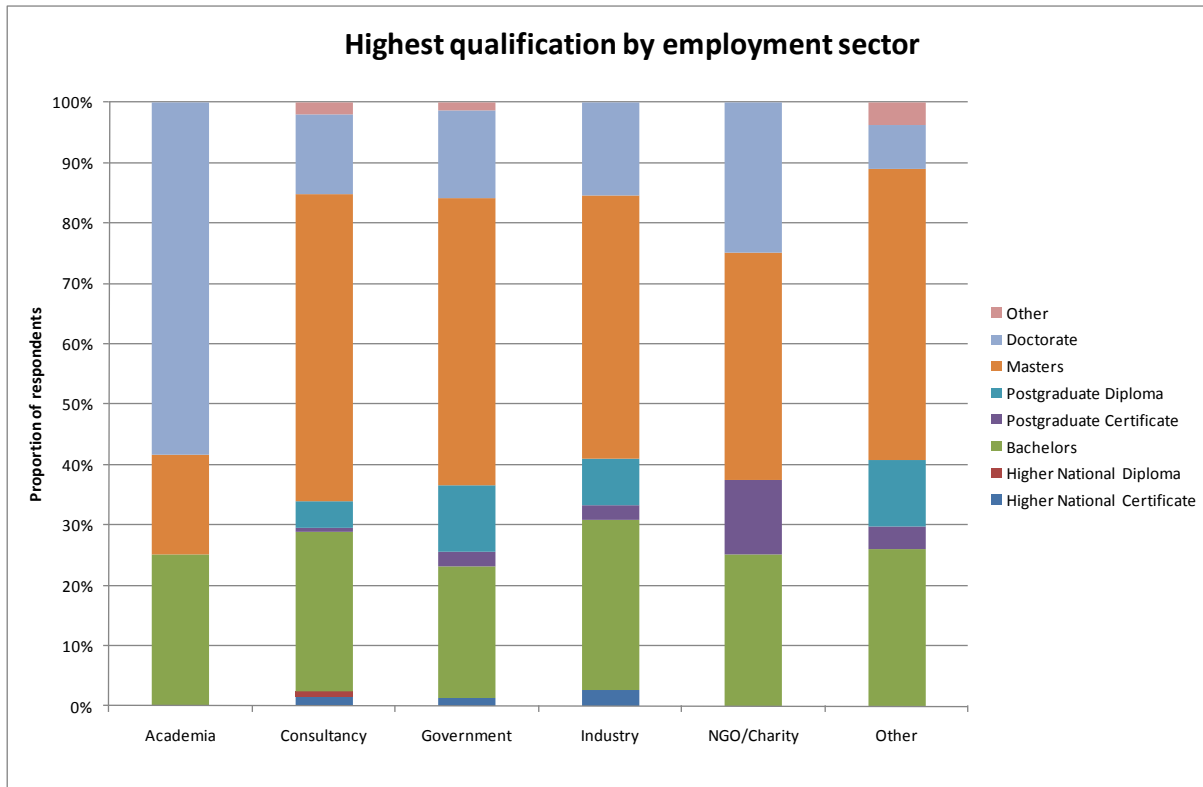
### Employment sector

Survey respondents were asked to select their employment sector from the following options: academia, consultancy, government (national and local), industry and non-governmental organisation, (NGO)/charity, or to specify an alternative. These results were then compared with the highest degree level (see Figure 7).

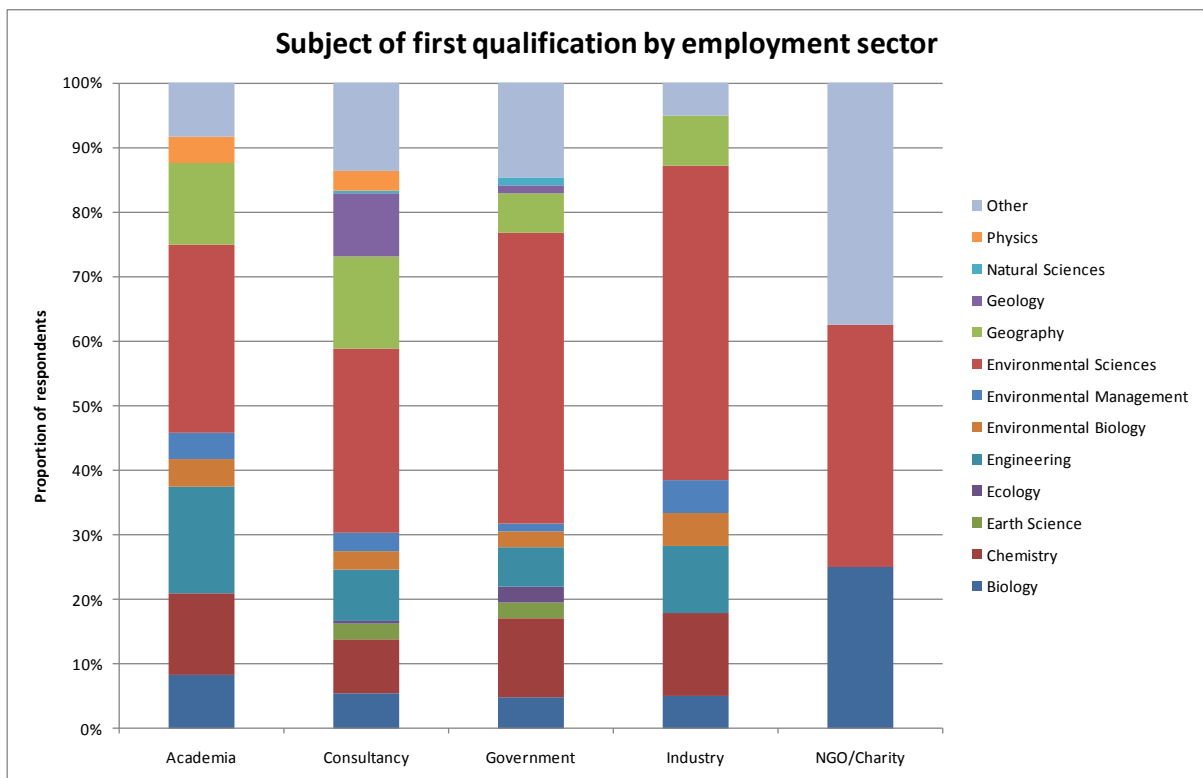
The majority of members working in academia had a Doctorate (58.3% of members working in this sector). For the other four sectors, Masters level dominated. The proportion of members holding a Bachelors as their highest degree was relatively uniform across the different sectors: academia (25.0%), consultancy (26.5%), government (22.0%), industry (28/2%), NGO/charity (25.0%).

Proportionately more members working in consultancy hold a Masters as their highest qualification compared with other sectors (at 51.0%), second is government (47.6%) and 43.6% in industry. Less than a fifth of members in academia held a Masters as their highest

qualification. No members working in academia or the Third Sector held a qualification lower than a Bachelors degree or a Postgraduate Certificate or Postgraduate Diploma.



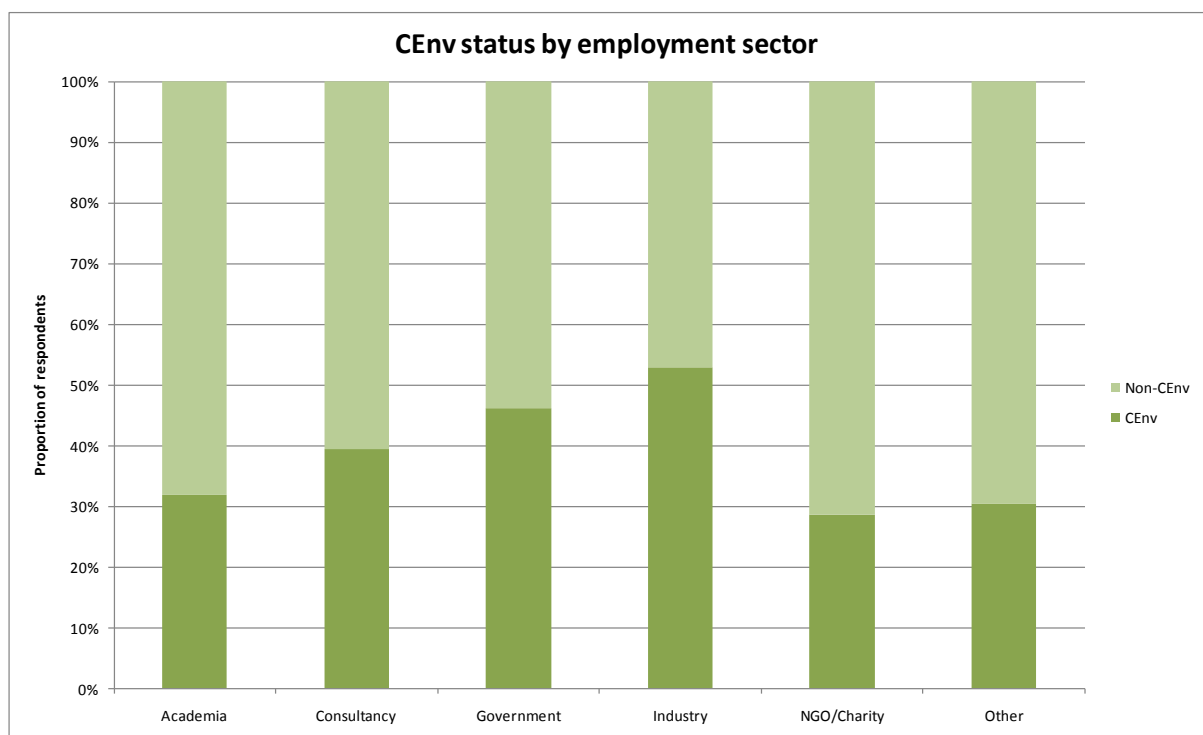
**Figure 7:** Graph showing the highest qualification level of respondents compared with their employment sector at the time of answering the survey (August 2010).



**Figure 8:** Graph showing the subject of the first qualification of respondents compared with their employment sector at the time of answering the survey (August 2010).

The representation of the different sectors was also compared with the subject of first degrees (see Figure 8 above). In all sectors, proportionately more members studied Environmental Sciences than any other subject. Engineering was the second most frequently studied subject in academia (16.7%), followed by Geography and Chemistry (both 12.5%). In consultancy the most prevalent subjects after Environmental Sciences were Geography (14.2%), Geology (9.8%) and Chemistry (8.3%). Chemistry was the second most frequently studied subject in government (12.2% respondents), followed by Geography and Engineering (both 6.1%). A similar pattern was seen in industry: Chemistry second with 12.8% of respondents, with Engineering third (10.3%) and Geography fourth (7.7%). The Third Sector varied from the other sectors, with Biology being the second more prevalent subject (25.0%). The 'other' subjects studied in the NGO/Charity sector were Marine Biology and German Literature, Philosophy and History.

The employment sector results were also compared with CEnv status.



**Figure 9:** Graph showing the CEnv status of respondents compared with their employment sector at the time of answering the survey (August 2010).

The proportion of respondents holding CEnv status is not spread evenly across the sectors. Industry is the only sector where more than half of the respondents in the sector are chartered (52.8%). Government holds the next highest with 46.2%, followed by consultancy with 39.5%. Academia and the Third Sector hold the fewest CEnvs (31.8% and 28.6% respectively).

## Field of employment

Environmental science is a broad subject, encompassing many employment fields. The survey asked respondents to specify which field they were employed in within environmental sciences. There were a number of fields not selected by any of the membership, which are not listed in this report (see Report Part I: Employment Status). These results were compared with the highest qualification level of members (see Figure 10 below).

The most highly qualified sector was Education & Training/Research, with 77.8% of respondents in this field holding a Doctorate, and 11.1% holding a Masters. This was followed by Chemistry (83.3% held a Masters or a Doctorate), and Auditing/Environmental Management (68.4%). In Hydrology/Water Quality, Impact/Risk Assessment and Sustainability 66.7% of respondents held a Masters or a Doctorate, followed by Air Quality Management (66.3% of respondents). Only a quarter of respondents working in Archaeology held a qualification of Masters-level or above. Members working in Marine Science only held a Masters or a Doctorate as their highest qualification, but there were only two data points for this field. There was only one data point for Climatology and for Physics.

The division of fields was also compared with the subject of members' first qualification, as shown in Figure 11. Members who had studied Environmental Sciences were working in all fields with the exception of Archaeology, Marine Science and Climatology. In all fields except Chemistry, Conservation/Ecology and Transport, Environmental Sciences was the most dominant subject of first qualification. Of the members working in Waste Management, 63.6% had Environmental Science first qualifications, while 62.5% of those working in Policy/Strategy and 50.0% of those in Hydrology/Water Quality and Built Environment/Planning stated likewise. Proportionally high numbers of respondents who studied Geography were found in Climatology (though there was only one data point for this), Impact/Risk Assessment (18.2% of respondents in this field), Health & Safety and Transport (16.7% in both), and Sustainability (14.3%). The subject of Chemistry was most frequently found in the following fields: Chemistry (50% of respondents in this field); Health & Safety and Hydrology/Water Quality (16.7% for both); and 15.8% in Auditing/Environmental Management. Engineering was most frequently studied in Transport (33.3% of respondents), followed by Health & Safety (16.7%), Sustainability (14.3%) and Enforcement/Monitoring/Environmental Law (13.6%).

Air Quality Management showed the greatest variety in the number of subjects studied (eleven subjects, excluding 'other' results), followed by Contaminated Land (nine subjects), and Impact/Risk Assessment and Sustainability (each with eight subjects). Climatology and Physics each only had one data point, and Marine Science only had two, so showed the least variety. Members working in Chemistry came from only three first qualification subjects (excluding 'other'), as did those working in Conservation/Ecology, Hydrology/Water Quality and Policy/Strategy.

Employment fields were also compared with CEnv qualifications (see Figure 12). In the majority of fields, the proportion of non-CEnv members outweighs those members with CEnv status. The field with highest proportion of chartered respondents was

Auditing/Environmental Management (63.2%), followed by Impact/Risk Assessment (57.1%). Within the fields of Marine Science and Hydrology/Water Quality, the proportions of chartered and non-chartered members are exactly equal. The fields with the lowest proportion of CEnvs were Geology (none), Air Quality Management (15.8%), Chemistry, and Transport (both 16.7%) and Education (18.2%). This excludes Climatology and Physics, which only had one data point.

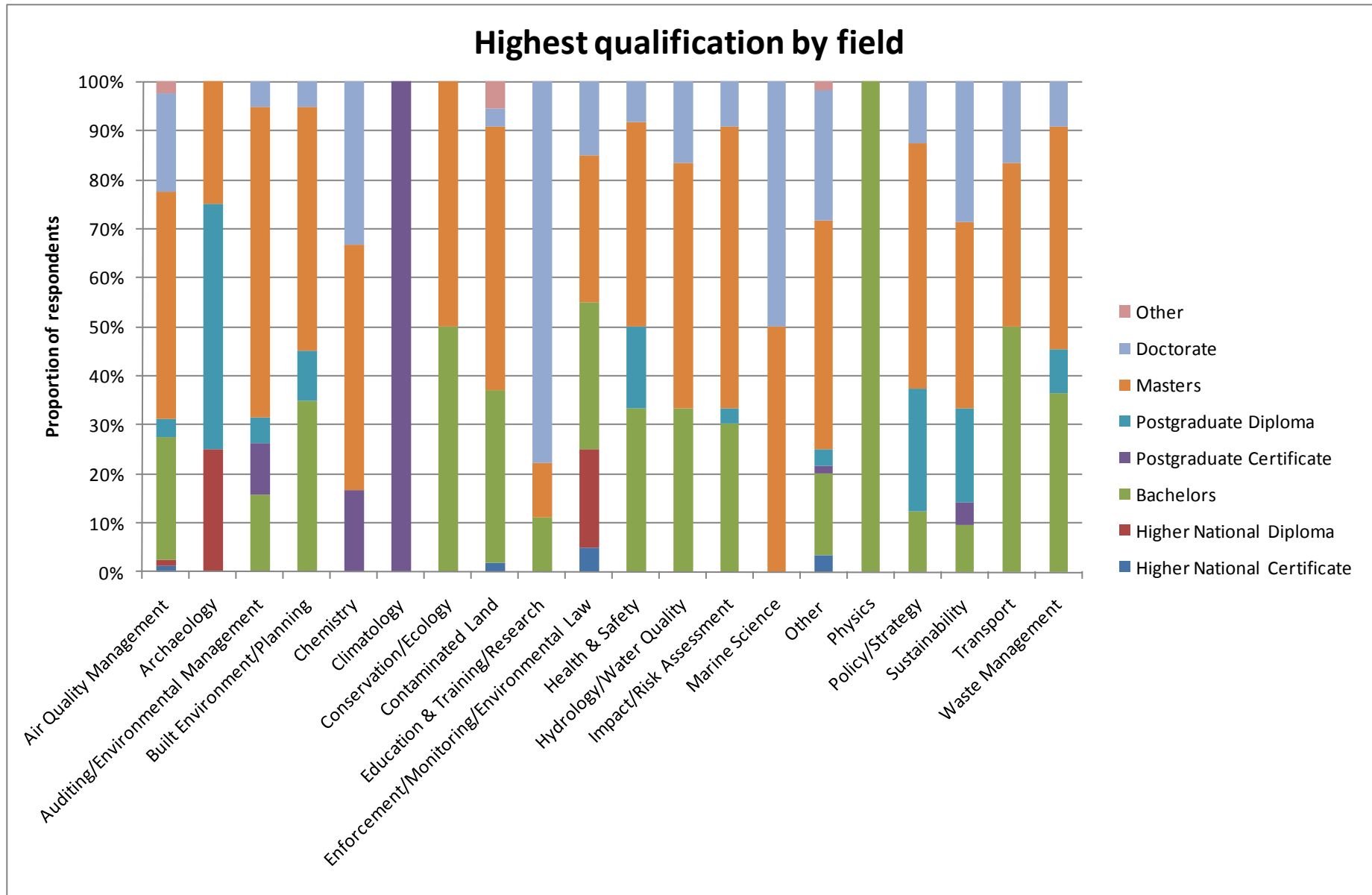


Figure 10: Graph showing highest qualification of respondents compared with their employment field at the time of answering the survey (August 2010).



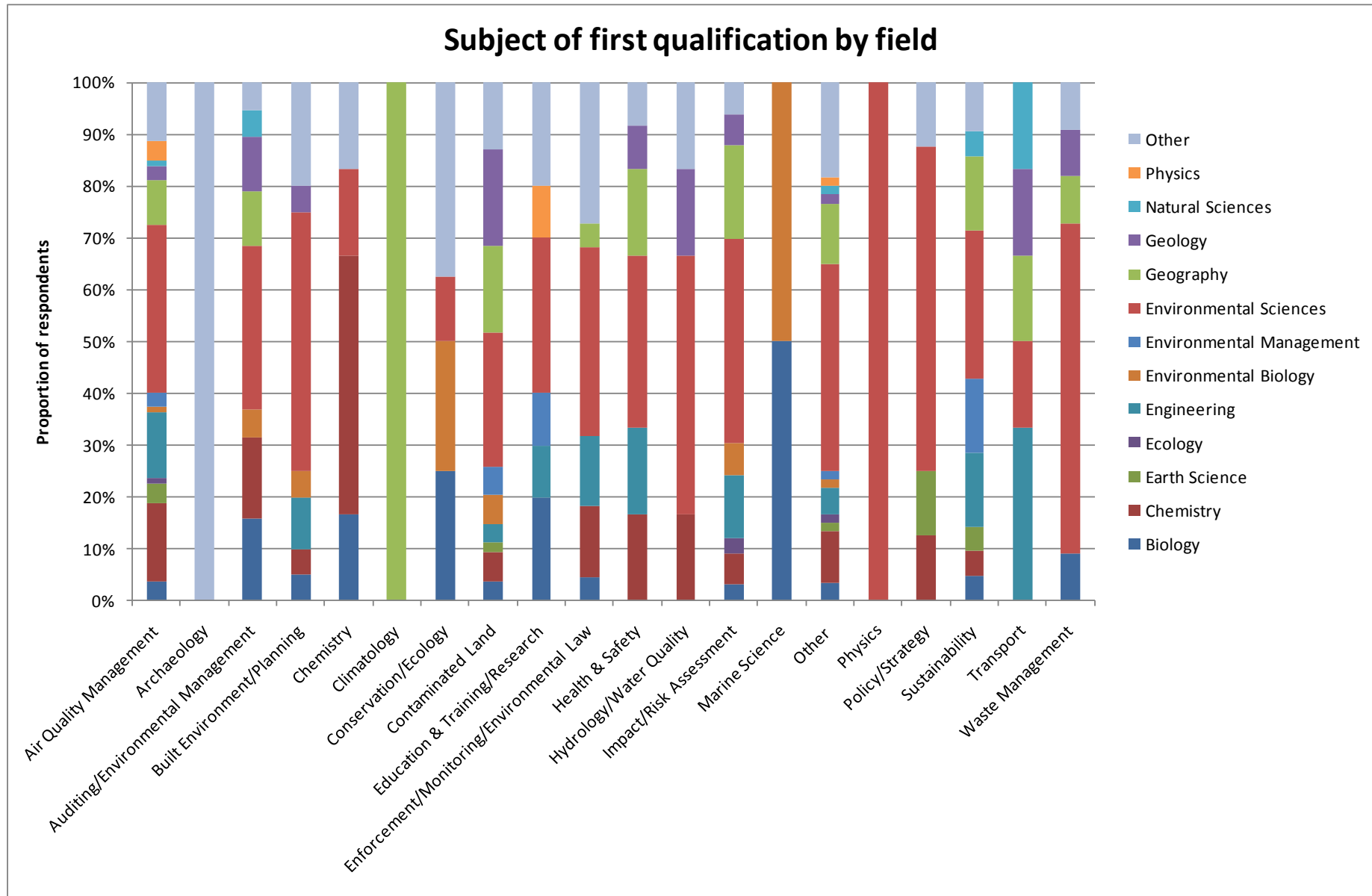


Figure 11: Graph showing highest qualification of respondents compared with their employment field at the time of answering the survey (August 2010).

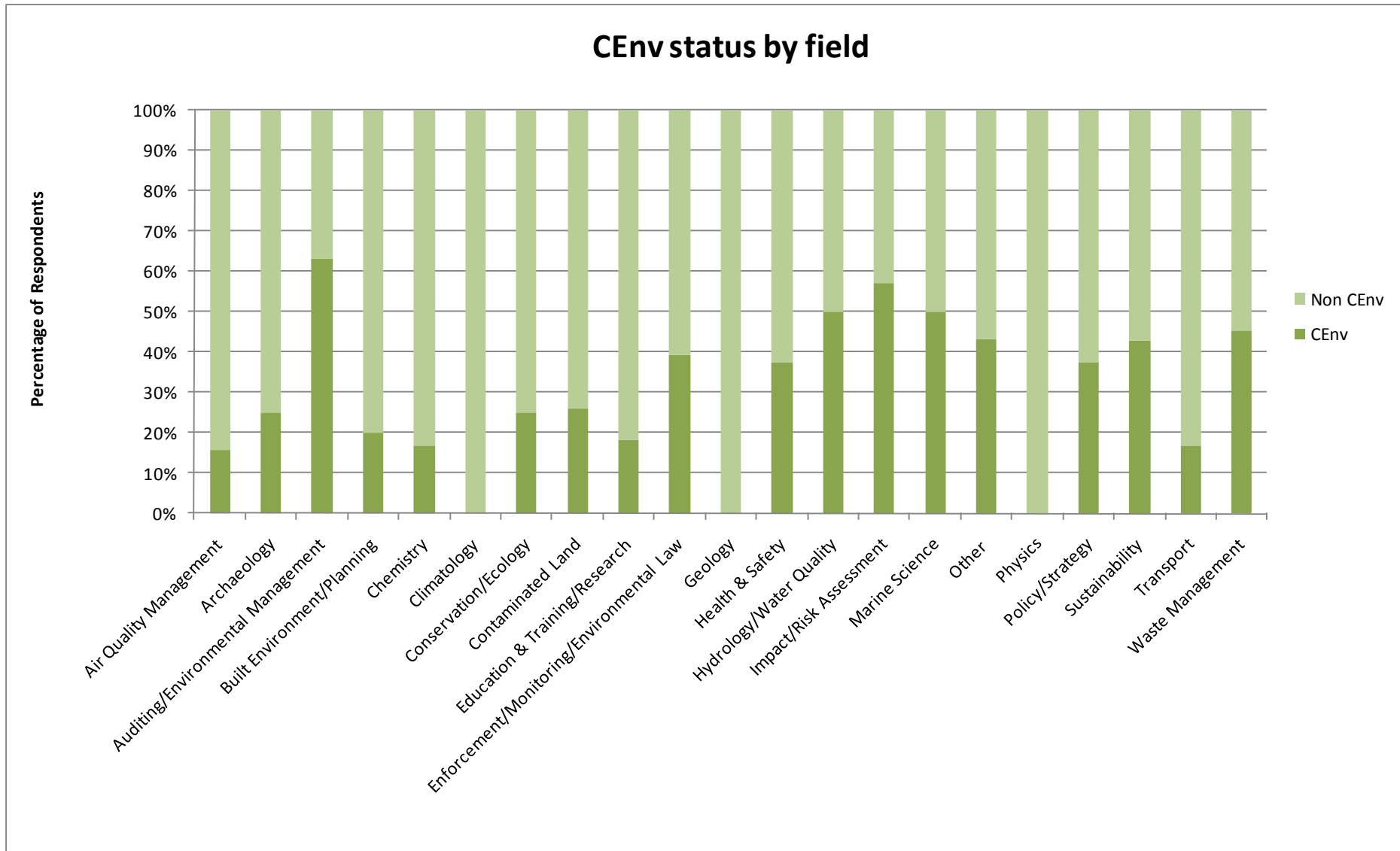
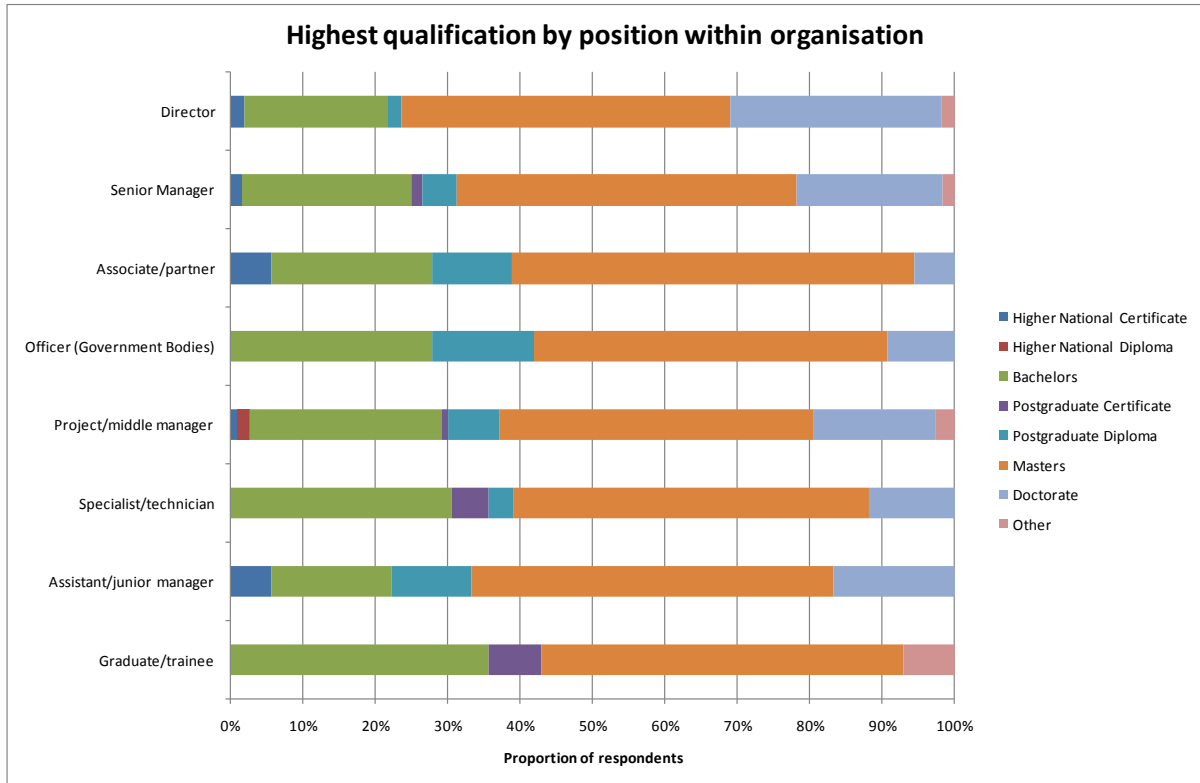


Figure 12: Graph showing CEnv status of respondents compared with their employment field at the time of answering the survey (August 2010).

## Position within organisation

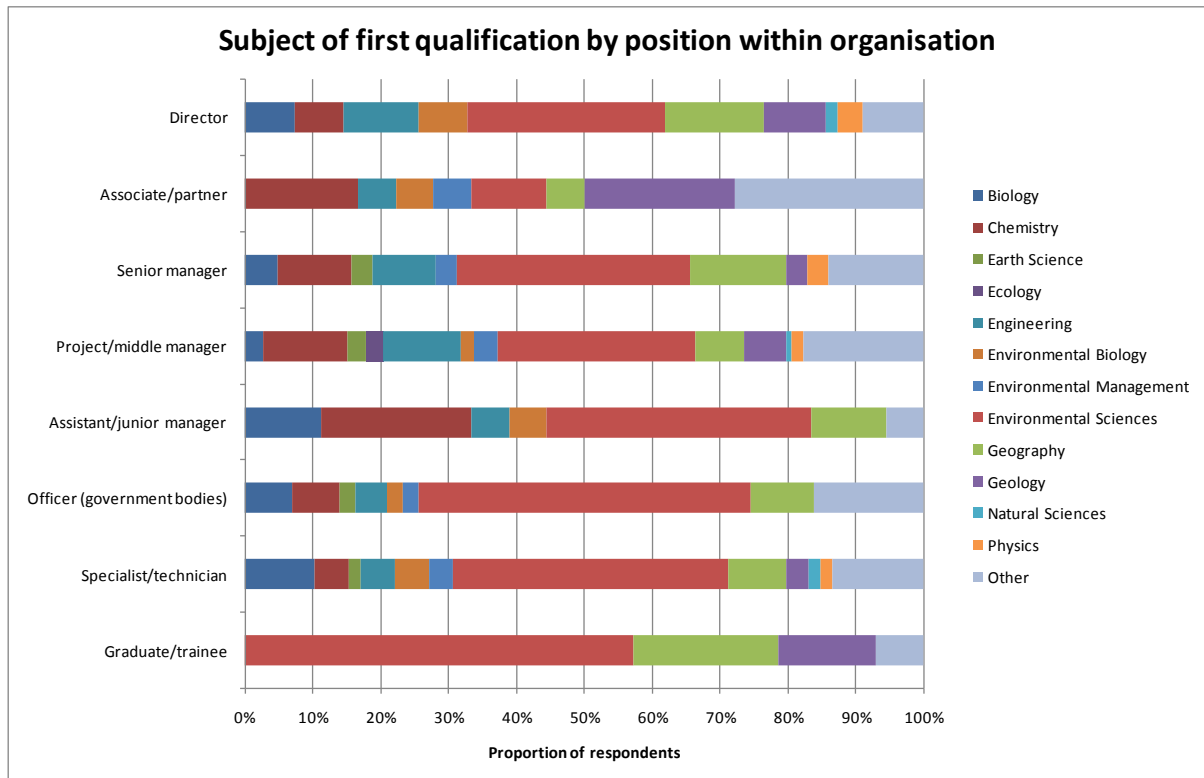
To understand the role of qualifications, it is necessary to investigate any potential relationship between qualifications and members' position within on the career ladder. Figure 13 shows a comparison the highest qualification of members with their employment position.



**Figure 13:** Graph showing the highest qualification level of respondents compared with their position within their organisation at the time of answering the survey (August 2010).

Those members working at a higher position within their company generally have higher qualifications than those working at a lower level. With the exception of Assistant/Junior Manager, there proportion of members with a Bachelors as their highest qualification decreases steadily from Graduate/Trainee level up to Director. The highest proportion of members with a Doctorate was found at Director level (29.1%), whilst no Graduate/Trainee level members held this qualification). Of those working at a Director level, 74.6% have either a Masters or a Doctorate, compared to just 60.2% of those working at a Project/Middle Manager level and 50.0% of Graduate/Trainees. Of those respondents working at Graduate/Trainee level, 35.7% hold a Bachelors degree only, yet only 20.0% of Directors stated this to be their highest qualification.

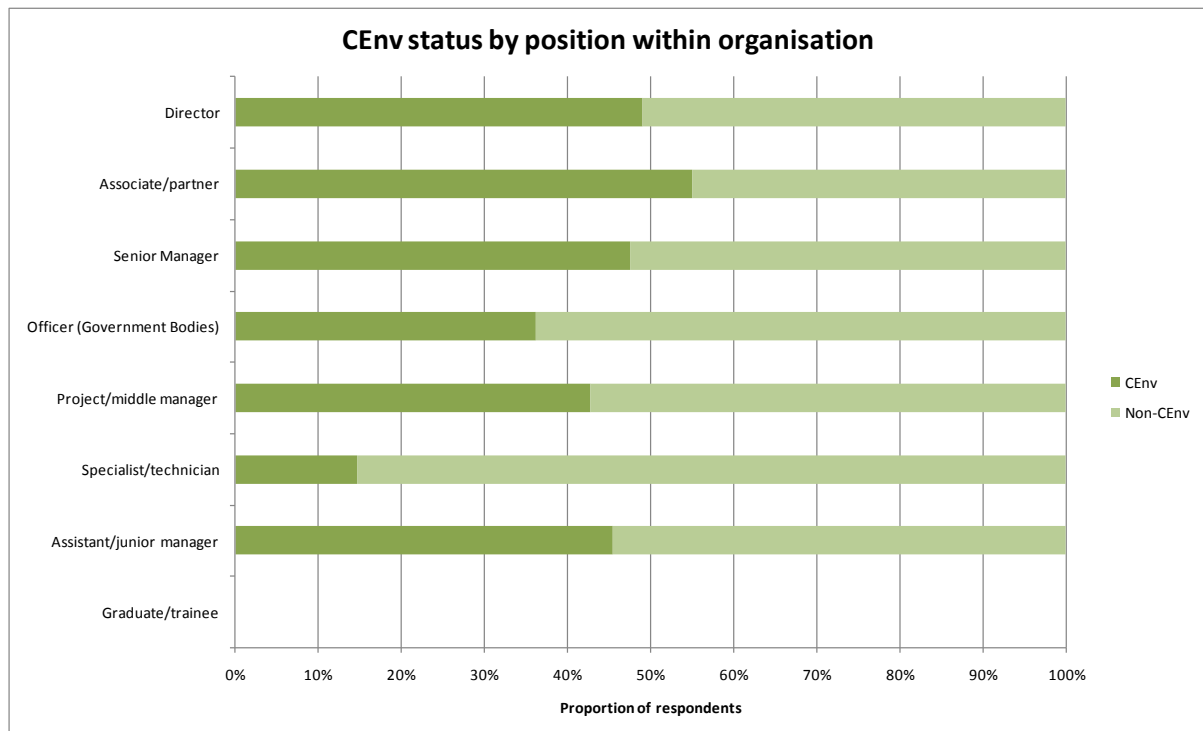
The position of members within their company was also compared with the subject of their first qualification (see Figure 14).



**Figure 14:** Graph showing the subject of the first qualification of respondents compared with their position within their organisation at the time of answering the survey (August 2010).

The graph illustrates that a higher proportion of members at lower levels have Environmental Sciences qualifications. Of those working at a graduate/trainee level or specialist/technician level, 57.1% and 40.7% respectively have Environmental Sciences first qualifications, compared 11.1% and 29.1% at Associate/Partner and Director levels respectively. No members who studied Earth Science or Ecology for their first qualification worked at Director or Associate/partner level. At Director level, the most highly represented subjects after Environmental Sciences were Geography (14.5% of respondents), Engineering (10.9%) and Geology (9.1%).

Figure 15 illustrates the CEnv status of eligible members (Full Members and Fellows) in comparison with their position within their organisation.

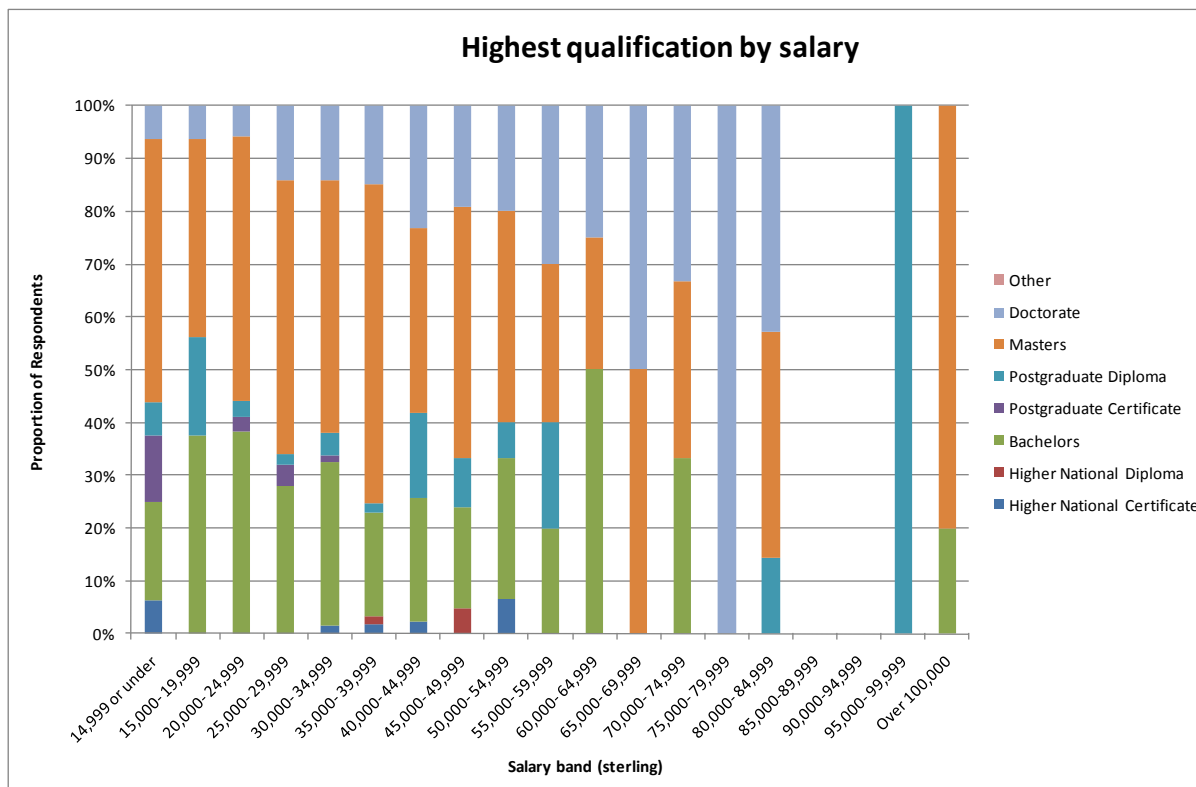


**Figure 15:** Graph showing the CEnv status of eligible respondents compared with their position within their organisation at the time of answering the survey (August 2010).

The proportion of members who are chartered is lower than the proportion of those who are not in all organisational positions, except Associate/Partner level (55.0% of respondents working at this level are CEnvs). The highest proportions of CEnvs are found at the top of the career ladder: Associate/Partner and Directors (49.1%). No eligible members were working at Graduate/Trainee level. Levels of Chartership are especially low in those in Specialist/Technician roles, where only 14.6% of members are CEnvs.

## Salary

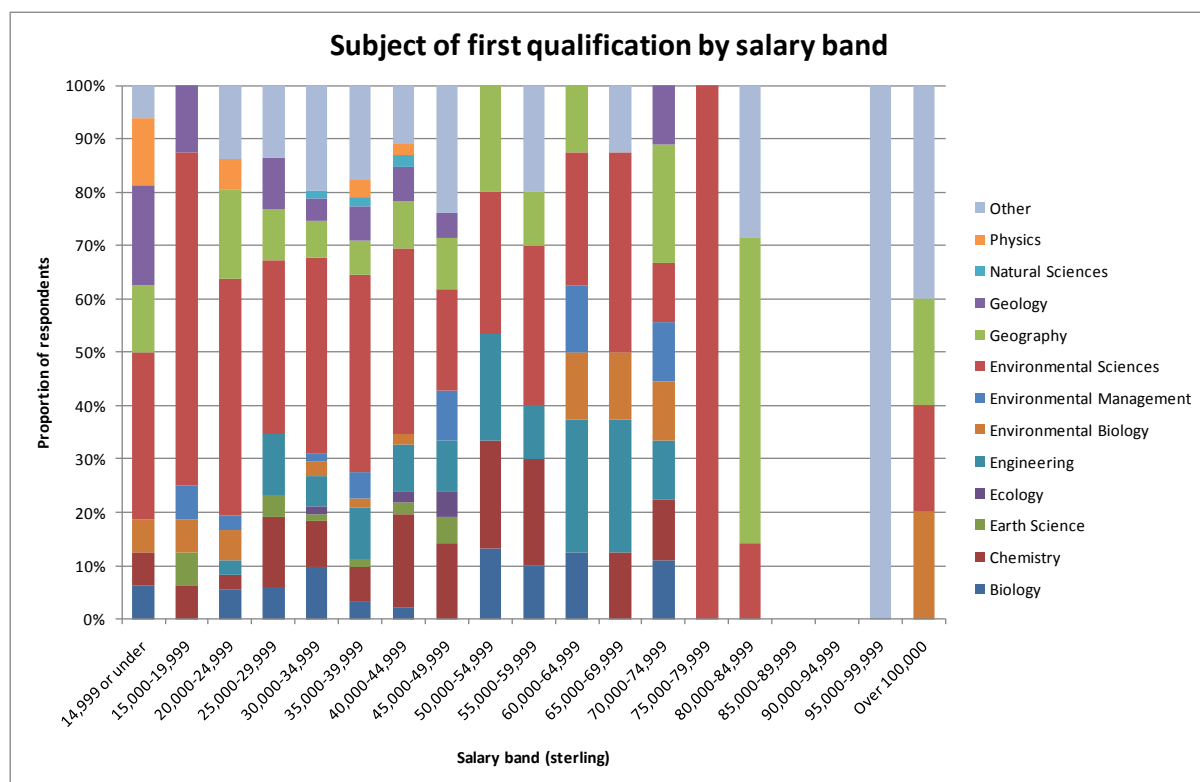
Survey respondents were asked to specify in which salary band their annual salary (in sterling) fell. These results were then compared with their highest qualification level.



**Figure 16:** Graph showing average annual salary of respondents, split by highest qualification, at the time of the survey (August 2010).

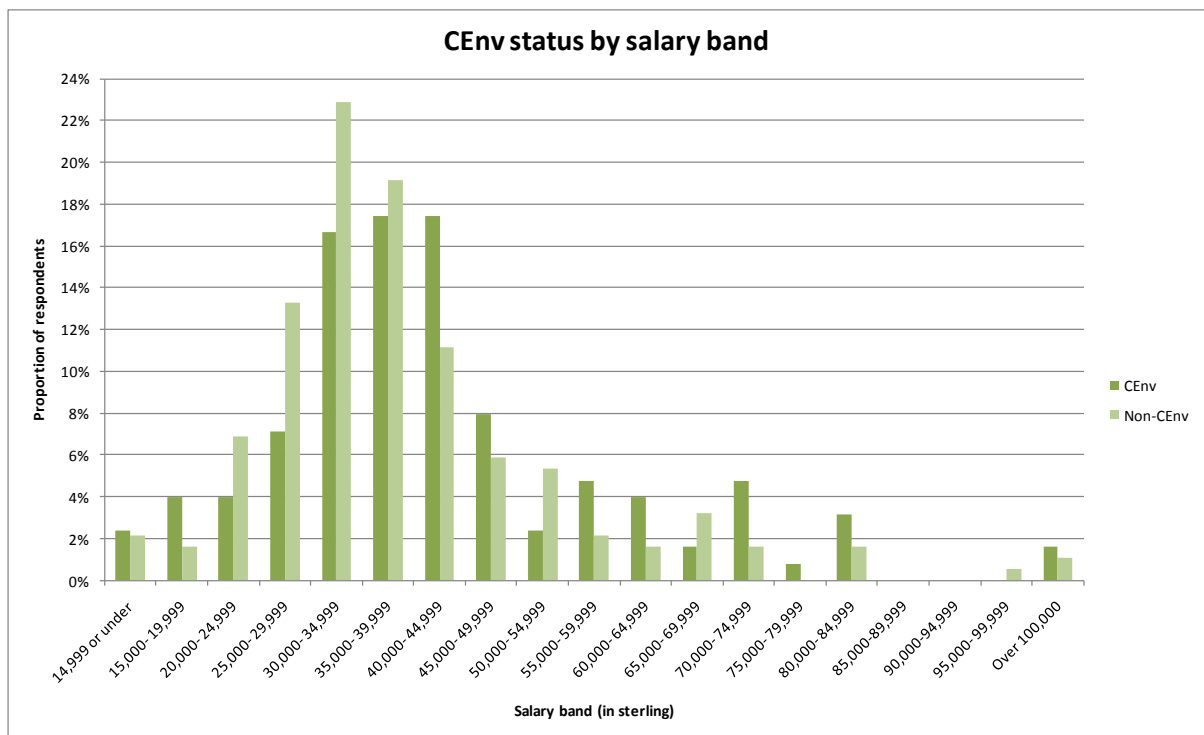
Those with higher qualifications were more likely to be earning in a higher salary band. Of members with a Doctorate as their highest qualification, 23.9% were earning above £55,000, compared to just 9.2% of those with a Bachelors. At the other end of the scale, 22.5% of members with a Bachelors degree as their highest qualification earn under £25,000, compared to 17.7% of those with a Masters Degree and only 6.1% of those with a Doctorate. No respondents were earning between £85,000 and £94,999. No members earning over £100,000 held a Doctorate, but the dataset for this salary band was low.

Members' salaries were also compared to the subject of their first qualification (see Figure 17 below).



**Figure 17:** Graph showing average annual salary band of respondents, split by subject of first qualification, at the time of the survey (August 2010).

Salary ranges vary greatly across the subjects of first qualification, with few discernable trends. Those studying Environmental Management were earning relatively at the high end of the pay scale- 70.0% earned over £30,000 per annum, compared to only 40.8% of those who studied geology. Those who studied Geography for their first qualification were also earning high salaries, of those that earned over £85,000 per annum, 50.0% stated that Geography was there the subject of their first qualification. The salaries of members who had studied Environmental Sciences were wide-ranging, with the large majority (62.1%) earning between £25,000 and £45,000 per year.



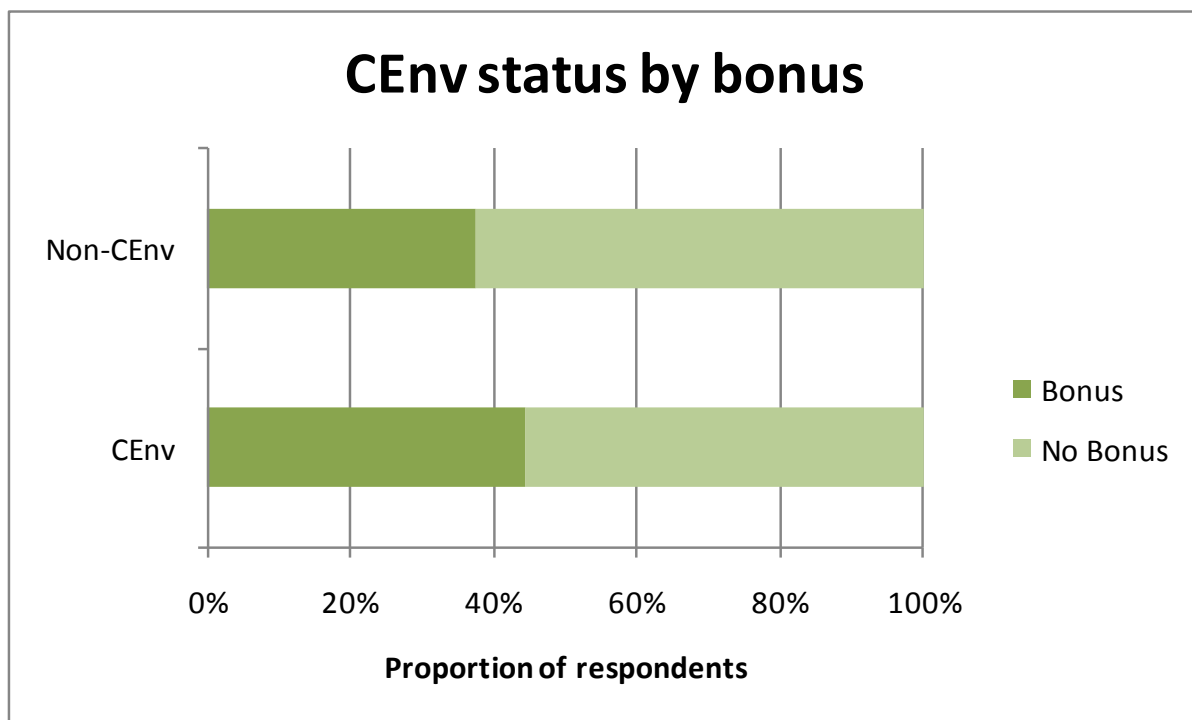
**Figure 18:** Graph showing average annual salary of eligible respondents, split CEnv status, at the time of answering the survey (August 2010).

The pattern for salary bands follows a similar pattern for CEnvs and non-CEnvs. The median salary bands for CEnvs were £35,000-£39,999 and £40,000-£44,999 whilst for non-CEnvs it was £30,000-£34,999. At the bottom of the pay-scale there was little difference between CEnvs and non-CEnvs: 10.6% of non-chartered members are earning under £25,000 per annum compared with 10.3% of those that are chartered. At the higher salary bands however, 11.9% of CEnv respondents earned over £65,000 compared to just 7.9% of non-CEnvs.



## Bonus

Survey respondents were asked to state whether they received a bonus in addition to their salary in 2009. This was analysed by qualification and subject but showed little noticeable difference. Figure 19 shows respondents who received bonuses, based on whether or not they were Chartered Environmentalists (CEnv).



**Figure 19:** Graph showing the proportion of eligible respondents who CEnvs, according to whether they received a bonus in addition to their salary in 2009.

A higher proportion of respondents who are chartered received bonuses than those who are not chartered. Of the CEnvs, 44.4% received a bonus, compared to only 37.6% of non-CEnv members who received a bonus.

## Contracted hours versus actual hours worked

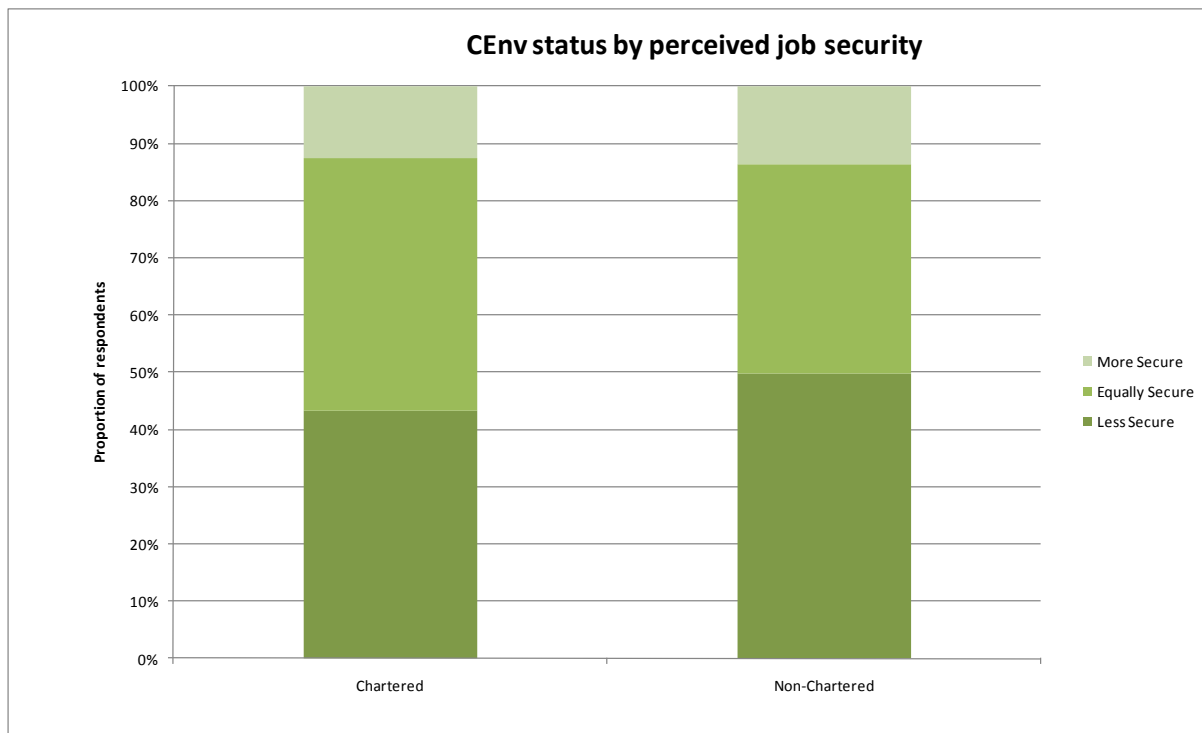
Respondents were asked to state the number of hours that they were contracted to work per week. They were also asked to state the average number of hours they actually worked per week. The proportion of respondents working more hours than they are contracted to is greater than those working equal to, or fewer than their contracted hours at all qualification levels except those with postgraduate certificates or 'other' qualifications. No noteworthy differences were found between any of the qualifications, Chartership and hours worked. This contrasts with the difference between men and women shown in Report 2.

## Job Security

Survey respondents were asked to state whether they perceived their job to be more, less or equally secure in 2010 than in 2009. The data showed no clear pattern between perceived level of job security and highest degree. Employment field data and job security were compared in Report 1.

The data illustrates the disparities in perceptions of job security between graduates of different subjects. Those members that had studied Environmental Biology, Environmental Management, Environmental Science, Geography, Geology and Natural Sciences had high levels of job security, with over 57.1% of respondents who had their first qualification in these subjects stating that they felt their job to be more or equally secure in 2010 than it was in 2009. Graduates of Ecology, Biology, Chemistry, Earth Science, Engineering and Physics perceived their jobs were less secure than other subjects; 66.7%, 52.4%, 55.3%, 57.1%, 53.1% and 57.1% respectively perceived that their job was less secure in 2010 than in 2009.

Figure 20 shows the perceived job security of eligible respondent split by their CEnv status.



**Figure 20:** Graph showing the perceived job security of eligible members, broken down by CEnv status, at the time of answering the survey (August 2010).

Fewer chartered members (43.3%) than non-chartered members (49.8%) felt that their job was less secure, although slightly more non-chartered members (13.7%) than chartered members (12.6%) perceived their job to be more secure in 2010 than in 2009. There was also a difference in the proportions of non-CEnv and CEnv who felt that their job was equally secure. Of those that are not Chartered Environmentalists, 44.1% felt their job was equally secure, whereas only 36.5% of Chartered Environmentalists felt the same.

### Section 3 – Conclusions and Recommendations

Looking first at the general results, the majority of IES members hold a postgraduate degree, most of which are Masters. The most frequently studied first qualification subject is environmental sciences, and the majority of eligible members are not chartered. It is however important to make strategic choices regarding qualifications, especially in light of recent rises in tuition fees. It is therefore important to consider qualification choices in pursuit of careers within environmental sciences. The 2010 Member Employment Survey provided the IES with the opportunity to present its findings on the relationship between qualification choices and careers.

The IES has a transparent Application Grading System for membership, based upon academic and work experience. When comparing qualification level and membership grades, it is unsurprising that Associates are more likely to have Bachelors, in comparison with the higher grade levels. Associate members tend to be earlier on in their career, as reflected in their qualification level. With the majority of members holding postgraduate qualifications, it seems likely that a career in environmental science is supported by taking qualifications to postgraduate level. The results suggest that it is easier to achieve a higher membership grade with higher qualifications. To reach Fellowship level, it is necessary to demonstrate distinction achieved within the field. Having a higher qualification, in particular a Doctorate, may allow members to demonstrate this more easily. Chartered status also shows a relationship to achieving Fellowship of the Institution.

Uptake of Environmental Science degrees is higher in Associates than for Full Members and Fellows. Graduates of IES accredited courses (the majority of which are in Environmental Sciences) are provided with the opportunity to re-grade to Associate Membership at a discounted rate. This may account to some degree for the high proportion of Environmental Science graduates at Associate level.

Environmental Science is however a comparatively young subject, with the first degrees appearing around 40 years ago<sup>1</sup>. This shift across the membership grades may therefore relate to the increase in the number of Environmental Science qualifications available over the last few decades. This is supported by the proportionally higher number of Environmental Sciences graduates occupying lower career positions. Longitudinal surveying may allow the IES to track any shifts in the representation of Environmental Sciences throughout the grades.

There is also a difference in the number of subjects represented by the IES membership grades. Fellows tend to have studied more 'traditional' subjects (in the form of Biology, Chemistry etc), which is reflected by the results for retired members. The Full and Associate Membership represented a wide range of subjects. This indicates that at present, whilst a

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<sup>1</sup> Blumhof, J. & Holmes, P. (2008) Mapping the Environmental Science Landscape Report. Pp. 32.

qualification in Environmental Sciences may be beneficial, there are a number of viable routes into the environmental sciences profession.

At a time of persisting job shortages, it is often desirable to gain a permanent job contract. These results suggest that those with postgraduate qualifications are more likely to gain a permanent position in their organisation. There was however little data for those members on temporary contracts or unemployed. Environmental Science pervades all types of employment, excepting those in active retirement. Data for retired members was low however, making it difficult to draw any strong conclusions from this. Interestingly those self-employed were more likely to have studied Geology, which may relate to the proportionally high numbers of Geology graduates working in consultancy.

There is some indication that chartered status is related to an increased likelihood to being on a permanent contract, at least for members on part-time contracts. Self-employed members may be more likely to seek Chartership as it is a demonstration to clients and stakeholders of their capability to work in the field of environmental sciences. The survey provided no information on when retired members stopped working. With the CEnv being a relatively new qualification (launched in 2004), this may account for the low uptake by retired members. All the eligible unemployed members were chartered, though this was a very low dataset (3 people).

The results of the survey suggest that it is beneficial to hold a postgraduate qualification to work in the environmental sciences, regardless of which sector. It is unsurprising that those working in academia are most likely to hold Doctorates. This is supported by the prevalence of Doctorates in members working in Education & Training/Research. Consultancy showed the most variety in the highest level of qualification held, suggesting that there are a variety of routes into this sector. The dataset for the Third Sector was low, so it is difficult to draw any strong conclusions. Regarding first qualification subjects, Environmental Science was the most frequently studied subject across all the sectors. This subject, along with Geography, offers a breadth of opportunities in terms of both employment sector and field. Chemistry and Engineering were also likely to offer opportunities across the sectors, but in particular in industry.

In terms of field choices, Chemistry proved more vocational, with half of the graduates working in this field. Only three subjects (excluding 'other') were studied by members working in this field. In contrast with this, members working in Air Quality Management and Contaminated Land came from the greatest variety of first qualification subjects. There was also great variety in the field of Impact/Risk Assessment and Sustainability. This suggests that the great breadth found in environmental sciences provides many routes into the different fields. Conservation/Ecology, Hydrology/Water Quality and Policy/Strategy were perhaps more vocational, with members in these areas tending to come from fewer subject areas. Those working in Archaeology were the least qualified, but all had a studied a vocational first degree ('Archaeology'). A number of fields (Physics, Climatology, Marine Science) have only a small number of IES members working within them, and consequently it is difficult to draw meaningful conclusion about qualification levels within these fields.

Chartership is not equally represented across the sectors; academia and the Third Sector have proportionally fewer CEnvS than the other sectors. Similarly the field of Education & Training/Research has a low proportion of CEnvS. The CEnv is a standard qualification demonstrating the capability and commitment of environmental science professionals to be in this line of work. The differences in the proportion of eligible members becoming chartered may be the result of two issues. The first is an undervaluation of Chartership by certain sectors. The second is that employees within these sectors may believe they are not qualified to become chartered. The IES therefore needs to work to promote the value of Chartership within these sectors. The organisation also needs to more actively demonstrate the breadth of professionals holding Chartership status; often members will be eligible to apply but will not consider themselves to be qualified. The IES should therefore promote the 'hidden chartered environmentalist', making members aware of their suitability to apply.

The proportion of CEnvS is low in Air Quality Management and Chemistry. This may be because the Chartered Scientist (CSci) provides a more appropriate qualification for professionals working in this field. The IES began awarding the CSci in November 2010, a few months after this survey was undertaken. With the IES now providing both types of Chartership, the organisation is in a better position to meet the needs of its varied membership. Future surveying regarding the uptake of both types of Chartership will enable the Institution to identify differences between the employment fields.

Members with higher qualifications are more likely to reach the top positions within their organisations and to earn at the top end of the pay scale. The same is true of members who are chartered, as the median salary for CEnvS is higher, and they are more likely to have received an additional bonus. Members who are CEnvS also perceived their jobs to be more secure than non-CEnvS. This indicates that qualifications remain valuable in progressing along the career path. The IES is committed to supporting the education of environmental sciences, in particular supporting the development and promotion of qualifications which will assist professionals in their continuous professional development.

The results of this survey demonstrate that while there is not one route through a career in environmental sciences, qualification choices remain influential throughout the life of professionals. Studying environmental sciences offers a broad range of potential careers, throughout the various sectors. Studying to a postgraduate level and pursuing Chartership offers more opportunities in terms of promotion and salary. Interestingly, the median salary of the IES membership is between £30,000 and £34,999, despite the fact that the majority of respondents are qualified to a postgraduate level. This indicates that environmental science remains a comparatively underpaid sector despite the need to be highly qualified.

These brief conclusions are the interpretation of the authors, but this report is intended as a discussion paper provoking dialogue amongst the membership and the IES Council. Comments should be addressed to Julia Heaton at the IES Project Office ([enquiries@ies-uk.org.uk](mailto:enquiries@ies-uk.org.uk)). The previous parts of the report discussing current employment and pervading gender issues in environmental science are available for IES members on the IES website.