

Training & Employment

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Green studies: an unsustainable bubble?

Students completing environment-related courses are encountering greater difficulties in finding employment than their peers in other disciplines. The reason is that the supply of new graduates exceeds firms' requirements. However, this general observation conceals differences depending on the level and content of the courses.

Employment
Qualification
survey
transition to work
Labour market
Environment

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The growth in environmental and green jobs has not been sufficient to absorb the ever-increasing numbers of graduates in this area. In 2008 the number of jobs in environment-related activities totalled 405,000, an increase of 2.9% over 2007 compared with an increase of 0.6% for the French labour market as a whole. Despite the economic crisis, the sector has remained very dynamic: the number of jobs rose very rapidly by an average of 3% per year between 2004 and 2008, compared with a little less than 1% for the economy as a whole. Nevertheless, having declined between 2005 and 2007, the number of people seeking employment in environment-related activities rose again in 2008 (+1.8%), outstripping the general rise in the number of people seeking work (+ 0.7 %). In 2009, the deteriorating economic situation led to a sharp increase in the number of people seeking work in environment-related activities (+ 27 %).

At the same time, there has been a veritable explosion in the number of environment-related courses, which in turn has led to a massive influx of young graduates in this area into the labour market. In 2004, 10,700 young people completed environment-related courses; by the beginning of the academic year 2007-2008, no fewer than 50,000 students in schools and universities had registered for the final year of courses

in the area. On graduation, these students further swelled the increasing numbers of people seeking environmental and green jobs, thereby reducing the likelihood of them finding employment. A real discrepancy is emerging between the aspirations of students and course designers, on one hand, and the reality of the labour market, on the other.

Labour market entry more difficult

Young people who had completed environment-related courses experienced greater than average difficulties in finding employment when compared with all young people leaving the education system in 2004 (*cf.* Figure 1). The studies reveal a difference of 10 percentage points in rapid and lasting access to employment compared with the totality of courses offered (47 % vs. 57 %).

However, this finding tells us nothing about the causes of these difficulties. They may result from the nature of the courses themselves or from other directly or indirectly linked characteristics, such as the location or level of the courses in question. The difference may also be explained by characteristics specific to the individuals who take these courses (age, gender, place of residence etc.). In order to capture the effect specific to the nature of the courses, it is necessary to use logistic regression models that measure the probability of having 'rapid and lasting access to employment' depending on a certain number of individual characteristics.

Labour market entry more than averagely difficult

Figure 1 • Comparison of labour market entry trajectories for graduates of environment-related courses and those of all courses



Source: Céreq, Generation 2004 Survey and French Environment Institute (IFEN).

These results are derived from the 2007 analysis of the 2004 *Génération* survey and its extension to environment-related courses. Data from this survey can be used to analyse the labour market trajectories over a 3-year period of young people who left the education system in 2004. The extension, carried out by Céreq, is based on a representative sample of 1,718 of the 10,700 individuals who completed environment-related courses in that year.

Individuals' trajectories over the first 3 years of their working lives were allocated to one of the following four types:

- rapid and lasting access to employment;
- deferred entry into stable employment following a period of inactivity, education or unemployment;
- persistent or recurrent unemployment;
- other non-employment situations (lengthy period of inactivity, withdrawal from employment, further training, return to education).

This typology was initiated by the *Laboratoire interdisciplinaire sur les ressources humaines et l'emploi* (LIRHE) and developed by Céreq.

Further information on the *Génération* surveys can be found at: <http://www.cereq.fr/index.php/themes/Enquetes-d-insertion-Generation>

Supply of labour exceeds demand

The results of these statistical analyses confirm that young people completing environment-related courses are less likely to obtain rapid and lasting access to employment and that the difference between them and their peers graduating from other courses is greater than suggested by the 'straight' comparison presented in Figure 1. All other things being equal, their probability of obtaining rapid and lasting access to employment is 35% less than for the totality of those leaving the education system.

The probability of being out of work for a lengthy period is also greater. On average, between 2004 and 2007, young people graduating from environment-related courses spent 8 months without work, compared with 5.7 months for the

totality of those leaving the education system. This longer period of unemployment is not due solely to individual characteristics. After all, the same model as used previously, applied to the probability of being out of work, shows that, all other things being equal, young people leaving environment-related courses have a 32.7% greater risk of being unemployed for a lengthy period.

How can the difficulties young people leaving environment-related courses encounter in finding work be explained? At a time when there is increasing talk of green and environmental jobs, sustainable development and environmental standards for companies, young people leaving environment-related courses might be expected to have high levels of success in their search for jobs. However, it is now clear that this trend is reflected more in the 'greening' of traditional jobs (in construction, logistics etc.) than in the net creation of radically new jobs.

The number of environment-related courses has exploded since the beginning of the 21st century. According to figures published by the Institut français de l'environnement (IFEN), the numbers of students enrolled on such courses increased by 2% a year between 1997 and 2005, compared with an increase in total student numbers of 0.5% per year. At the same time, it would seem that the demand for labour in the environmental sector proper or for mainly environment-related skills in other sectors has not increased to the same degree (even though it has increased to a relatively greater extent than that for other types of skills). Thus these results would seem to be attributable to the fact that the growth in

Eco-activities and environmental and green jobs

According to the General Commission for Sustainable Development (Commissariat Général au développement durable), environmental and green jobs are those generated by **eco-activities**, that is activities that produce goods and services intended to measure, prevent, limit or remedy environmental damage to air, water or soil and problems related to waste, noise and ecosystems (international definition by OECD and Eurostat). The jobs are created directly by the environmental activities of companies, local authorities and voluntary associations.

Environment-related courses

In the absence of a specific code in the classification of educational specialisms (NSF), the environment-related courses analysed here are included in an *ad hoc* classification produced by the Ministry for the Environment, Sustainable Development, Transport and Housing. This *ad hoc* classification was the basis on which the extension of Céreq's *Génération* survey was constructed.

demand for graduates of environment-related courses has lagged behind the growth in the numbers completing such courses.

Thus what is emerging in the labour market is a bottleneck, or at least a delay in the process of adjustment between the supply side, where the number of job seekers is rapidly increasing, and the demand side, which is temporally or economically out of phase.

The factors influencing the ability of graduates of environment-related courses to access employment

Young people leaving environment-related courses generally find it more difficult to find employment than the other young people leaving initial education. However, not all of them are in the same situation and certain factors, whether individual or linked to the courses they have completed, influence their chances of accessing employment. Thus the level of the course and the subjects studied exert considerable influence. In contrast to the situation observed among the population questioned for the *Génération* survey, age has very little effect on labour market entry. On the other hand, gender discrimination remains a

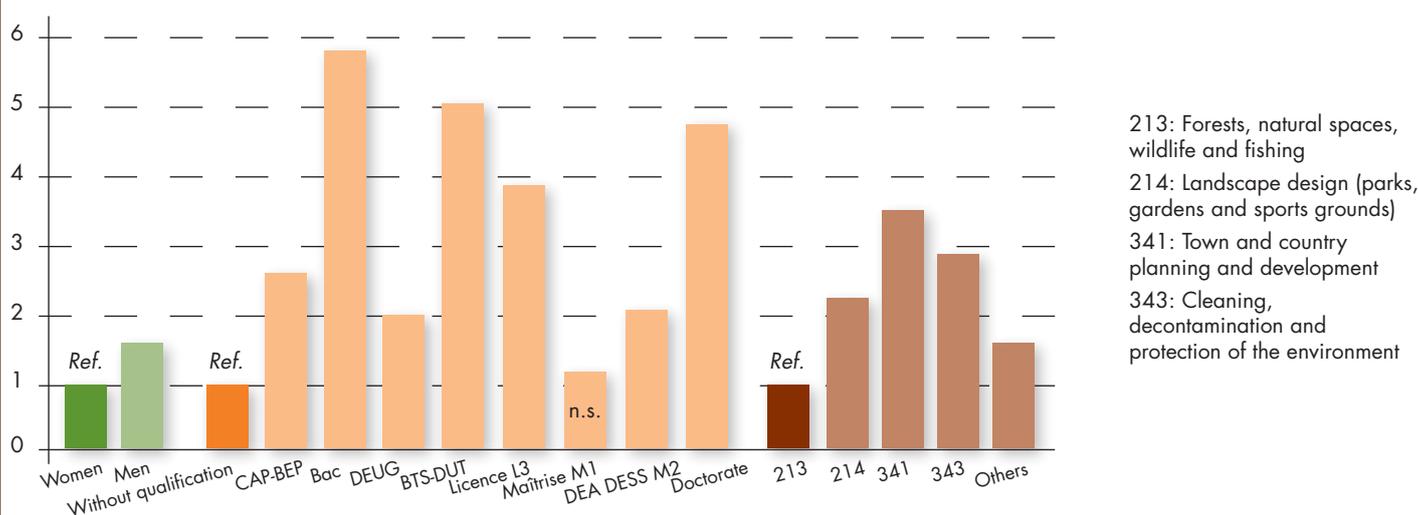
reality for those leaving environment-related courses: in these specialisms, a man's chance of finding work quickly is 1.6 times greater than a woman's.

As is the case for all courses, the level of qualification obtained is a factor in determining the chances of accessing employment. In these specialisms, however, the qualifications that give students the best chances of accessing employment are, firstly, the *baccalauréat*, and then the BTS (*brevet de technicien supérieur*) and the DUT (*diplôme universitaire de technologie*) and a PhD. Thus holders of the *baccalauréat* have a 5.8 times greater chance than those without the qualification of obtaining rapid and lasting access to employment. While those with no qualifications experience the greatest difficulties, the CAP-BEP (*certificat d'aptitude professionnelle/brevet d'études professionnelles*), DEUG (*diplôme d'études universitaires générales*) and master's degrees are qualifications that do not facilitate rapid entry into the labour market.

Within the sphere of environment-related courses itself, not all specialisms are equal. The specialism that offers the least chance of finding good-quality employment seems to be 'Forests, natural spaces, wildlife and fishing'. A student who has completed a course in 'Cleaning,

Unequal chances of rapid access to employment depending on level of qualification and specialism

Figure 2 • Logistic regression of probability of obtaining rapid and lasting access to employment for those completing environment-related courses



Logistic regression is a statistical method used to establish a relationship between a variable to be explained (here: rapid and lasting access to employment) and a series of explanatory variables (here: gender, level of qualification and specialism).

Interpretation: the probability of an individual completing an environment-related course at the level of the *baccalauréat* obtaining rapid and lasting access to employment is 5.8 times greater than for someone without a qualification in the same specialism, all other things being equal.

These results are derived from a logistic regression of the probability for students completing environment-related courses of obtaining rapid and lasting access to employment. The regions in which the individuals lived and received their education are the control variables. The results are significant at the 1% threshold, except for the DEUG, for which they are significant at the 5% threshold; for master's degrees they are not significant.

Source: Céreq, Generation 2004 Survey.

decontamination and protection of the environment', 'Town and country planning and development' or 'Landscape design (parks, gardens and sports grounds)' has a 1.6, 2.2 and 3.5 times greater chance respectively of obtaining rapid and lasting access to employment than one who has completed a course in 'Forests, natural spaces, wildlife and fishing'. It is also interesting to note that a student who has done some environment-related study in a specialism not directly linked to the environment (such as chemistry, physics, geography, etc.) is 1.6 times more likely to obtain rapid and lasting access to employment than one who has obtained a specialist qualification in 'Forests, natural spaces, wildlife and fishing'.

These results raise once again the question of the match between the courses on offer and the supply of jobs. Thus environmental protection and town and country planning are the most popular of the university courses at level I (DEA, DESS, master's, engineering diploma, PhD) and level II (general and vocational degrees), although there are few jobs available in these areas. Conversely, courses in 'Pollution prevention and reduction' attract many fewer students although there are more employment opportunities in this area. Firms have considerable needs for expertise in the prevention and understanding of the environmental risks associated with their activities, whether at the financial or technical level. This explains why graduates who have completed predominantly subject-based degrees (in biology, management, etc.) with an environmental specialisation are better equipped to enter employment.

Some possible adjustment measures

It would seem that what we are witnessing here is indeed a 'bubble' phenomenon. The provision of courses and the number of students taking them have increased considerably in recent years. This increased provision reflects a 'greening' of society's

aspirations, at least among the young people who are opting for these courses in such large numbers, the teachers and lecturers who design them, the ministers who validate them and the political discourse that gives expression to those aspirations. Jobs have not been created at the same rate and these young people, when confronted with the reality of the labour market, are becoming genuinely disenchanted. The absence of a clear hierarchy among the various levels of qualification, which would serve as a guide for recruiters, confirms that the match between the supply and demand for labour has not yet fully matured. The question then is whether this bubble is going to break up of its own accord or whether the sector will mature in the years to come. This would, in any event, be desirable for the employment prospects of the young people who have taken these courses. But how can the process be aided?

Is the tightness of this particular labour market going to lead to 'natural' regulation of the number of environmental courses after a few years' worth of graduates have been sacrificed? Is there a need for a Malthusian cull of environment-related courses and restrictions on the number of new qualifications, albeit at the risk of making equally bad forecasts and recreating the same difficulties (over-adjustments)? Can this supply of trained, specialist labour actually create its own employment opportunities? Should measures be put in place to support entrepreneurs in the area of environmental risks in conjunction with a strengthening of norms and regulations? There are two main modes of adjustment that can be used to deal with the bubble identified in our analysis: measures to increase demand in the labour market, on the one hand, and, on the other, measures to restrict the supply of courses. The analysis raises once again the nagging question of what, in view of people's legitimate aspirations and particularly those of the younger generations, the ideal balance between educational provision and employment might be. ■

Further reading

- « L'insertion des étudiants sortants des formations environnementales supérieures », L. Chiarore, *Le point sur*, CGDD-SOeS, n°45, 2010.
- « L'insertion des jeunes issus des formations environnementales : parcours professionnel de 2004 à 2007 », L. Chiarore, *Chiffres et statistiques*, CGDD-SOeS, n°37, 2009.
- « Le dynamisme des formations environnementales à l'épreuve du marché du travail », L. Chiarore, *Le 4 pages de l'IFEN*, n°125, septembre 2008.

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