

## **The Treaty versus the "Ideal" World**

### **- Employment and the Environment**

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**Abstract**

Amongst the urgent priorities which the European Union (EU) is facing at the beginning of the twenty-first century is the challenge of creating an environmental policy which will make an effective contribution to the job creation process. In July 1997 the European Commission presented a Communication on Environment and Employment (CEC 1997a) which was intended to take the debate forward within the EU about how to overcome environmental degradation whilst at the same time reducing Europe's unacceptably high levels of unemployment. This paper puts forward the view that the attempts to link employment opportunities to environmental improvement are not misplaced but that simply too much may be made of the positive aspects of the linkage. This is despite the fact that most of the evidence from Europe and the US supports a more sceptical view of the extent to which environmental protection measures will destroy jobs rather than create them. The argument of this paper is that the Commission Communication supports a somewhat unrealistic view of what can be achieved in terms of the employment creation potential of environmental protection measures. As a consequence the Commission is in danger of supporting a strategy which has a misplaced focus. A more rewarding strategy which would protect the environment would be to concentrate on the effort to achieve the objectives of Article 6 TEC to integrate environmental objectives to all areas of the EU's policies. In addition the focus of attention to create employment should remain on the necessity to promote measures which would improve the overall level of competitiveness of European industry. The main advantage of the Commission's 1997 Communication appears to be that it provides a framework for those who wish to challenge the orthodoxy of the view that environmental protection measures will inevitably destroy jobs. Its disadvantage is that it reduces the value of two distinct aspirations (to protect the environment and to create employment) which have substantial merit in their own right.

## Introduction

If we lived in an Ideal World environmental protection and job creation would be attainable objectives for the European Union. Unfortunately the ratification of the Amsterdam Treaty will not be achieve a major step forward towards these desired objectives! Europe is facing a major problem with respect to unemployment levels that are still high, at around 1 in 10 of the working population. Whilst there has been some improvement in the unemployment rate recently the levels have remained high throughout the 1990s. At the same time as overcoming this problem there is a concerted effort being made within the EU to improve environmental protection. Concern is being expressed by some sectors of industry and governments that these might be mutually exclusive goals because many environmental improvements can damage the competitiveness of companies. If so then a decision must be made about which of these two objectives should be given priority. This trade off is not the view supported by the European Union. Instead of improved environmental protection having a negative impact on employment, D-Gs V and XI of the European Commission have suggested that there is a positive link between the two policy areas and that it is possible to improve the environment and reduce unemployment (CEC 1997a).

It is incontestable that both are problems which require urgent resolution. If not the consequence is that more jobs could be lost, and at the very best, there will be little improvement in the existing levels of environmental degradation. The Treaty of Amsterdam has reaffirmed the objective on integration of environmental objectives to all areas of the Community's (Article 6 TEC)<sup>1</sup> policies and in addition the Treaty introduced the necessity to integrate employment objectives to all EC policies (Article 127 TEC)<sup>2</sup>. This paper is however questioning the wisdom of seeking positive linkages between environmental protection and job creation. One of the questions being posed in this paper is if the two policy areas which have this integrative commitment given in the Treaty are themselves appropriate for such linkage.

This paper concentrates initially on the reasons for the current high levels of unemployment within the EU with a consideration of the conditions which are necessary to increase levels of competitiveness within industry. The focus of the criticism in the latter part of this paper is on the views contained in the 1997 Commission Communication on the linkage between employment creation and environmental protection.

## Linkage of environmental protection and employment creation within the EU

The quality of the environment and the working population are part of the resource base of the European Union. A characteristic feature of the late 1990s in the EU is the

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<sup>1</sup> Article 6 TEC (ex. Article 3c)

Environmental protection measures must be integrated into the definition and implementation of the Community policies and activities referred to in Article 3., in particular with a view to promoting sustainable development

<sup>2</sup> Article 127 TEC (ex. Article 109p) (2) The objective of a high level of employment shall be taken into consideration in the formulation and implementation of Community policies and activities

failure to achieve a balance between the use of the environmental resources of the EU and the labour force. There is an apparent under use of the labour resource reflected in the figures for the unemployed combined with an over use of the environment shown in the continuing problems of environmental degradation. At the core of the current problems of unemployment and environmental degradation within the EU is a failure to achieve a rational allocation of resources. The EU has made a clear commitment to finding mechanisms by which a rational allocation of resources may be achieved (Article 2 TEU, Article 2 TEC)<sup>3</sup>. As part of this commitment the problems associated with employment creation and environmental protection must be resolved.

Removing the imbalance in the rational allocation of these aspects of the EU's resource base by the combining the two objectives is not a new ambition of the EU. The origins of the idea may be traced through a number of developments in the EU since the mid 1980s. Integration of environmental protection objectives to all EU policies was added to the Treaty in the Single European Act (SEA) in 1987. This was reaffirmed in the Maastricht Treaty in 1993. In the Fifth Environmental Action Programme in 1992 (CEC 1992a) the importance of integration of environmental objectives to the specific sectors of the economy which had the most potential for environmental degradation was emphasised. The White Paper on Growth Competitiveness and Employment identified the human costs of business strategies, which were driven by labour saving constraints and the quantitative and qualitative aspects of the under-use of the labour resource. The conclusion reached in the Growth White Paper was that "any new policy will have to provide substantive answers to the questions of how to reduce pollution and how to improve the quality of life in a broad sense. The former involves reversing the present negative relationship between "classical" economic growth and more pollution." (CEC 1993:180).

The Treaty of Amsterdam revived the debate once more through the introduction of the Employment Chapter and article 127 (1) 2 TEC and Article 6 TEC. Both these articles contain a commitment to integration of the specific objectives to EU policies. The legal basis for the linkage has been provided in the Treaty – the integration of the objectives of environmental policy and employment creation have to be achieved in these policy areas in the same way as they have to be integrated into any other policies. In this paper the question being raised is the extent to which it is possible to integrate objectives of environmental protection and employment creation to the areas of environmental protection policy and employment policy themselves.

In the joint communication from DGs V (Social Affairs) and XI (Environment) which is the focus of criticism in this paper an attempt is made to show how the linkage may be made between environmental protection and employment creation. There were two underlying themes to this communication. Firstly that the objective of the EU is to achieve sustainable growth and rational allocation of resources. Secondly that there are large numbers who are unemployed. The social problems which result mean that a large number of people live in poverty or are excluded from society. Throughout the

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<sup>3</sup> Article 2 (ex Article B) TEU "The Union shall set itself the following objectives to promote economic and social progress and a high level of employment and to achieve balanced and sustainable development...", Article 2 (ex Article 2) TEC "The Community shall have as its task ....to promote throughout the Community a harmonious, balanced and sustainable development of economic activities..."

Communication however the focus was on the need to protect the environment rather than on employment creation. It would appear as if the officials responsible for the communication were themselves not whole-heartedly committed to the ideas it contained.

The officials of DG V appear to have placed a great deal of reliance on the integration clause. The view of the officials of DG XI is that the officials of DG V were taking a somewhat unrealistic view of what may be accomplished in the short term<sup>4</sup>. For the officials of DG XI the commitment to the integration of environmental objectives has existed since the Single European Act was adopted in 1987. The European Court of Justice (ECJ) has however still to review a case brought specifying failure to integrate the environmental objectives. The problematic area of establishing a test of proportionality of environmental objectives against the policy objectives of the policy in question remains to be resolved. A similar test of proportionality will be required in the case of employment.

In the Employment Guidelines for 1999 "...sustainable development and the integration of environmental concerns in other Community policies were endorsed by the Amsterdam European Council.....(in addition) ..Member States are invited to give effect to this integration within their national employment strategies by promoting employment creation in the environmental field..." (OJ 1999a C 69:3 para.14 ). The linkage of environmental protection and employment creation is also made in the commitment to " ...promote measures to exploit fully the possibilities offered by job creation at local level, in the area of environmental technologies and in new activities linked to the needs not yet satisfied by the market and examine with the aim of reducing any obstacles in the way of such measures. In this respect the special role of local authorities and the social partners should be taken into account" (OJ 1999a C 69: 6)

The "received wisdom" for much of the EU's business community is that environmental protection legislation has caused so many constraints on the competitiveness of companies that employment is more likely to be lost than created as a result. The evidence to support their view is from the period of growth in the 1960s when environmental regulation was limited and economic growth was seen to take place. The evidence to support their view in the 1990s is ambiguous but the difficulty is to convince the business community that that there is a positive linkage. Indeed in 1994 UNICE (Union of Industrial and Employers Confederations of Europe) had concluded unequivocally that ...enhanced environment policies should not be expected to remedy unemployment in the foreseeable future, quite the reverse (and that).....measures should be developed with persistence but without seeking to interconnect the two..." (UNICE 1994)

This paper puts forward the view that attempts to link employment opportunities to environmental improvement are not misplaced, but that simply too much is being made of the positive aspects of the linkage. If this is the case, there is a danger that any strategy of sustainable development (however this is defined it does include the three basic objectives of environmental protection, economic growth and social equity) may not be seen as credible. Certainly there are cost saving to be had as a

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<sup>4</sup> Interviews with the desk officers in DGs V, XI responsible for the Communication held in June 1998

result of improved environmental performance. Spending on environmental protection does tend to rise in more successful economies where there is a steady rise in national income per head. At the same time the growth of opportunities in the sector of the economy devoted to environmental products has been such, that there are real prospects of European companies developing a comparative advantage in the ecotechnologies. However, the growth in the number of jobs in the environmental protection industry may not be permanent nor created in large numbers. The impact of competitive global markets can hit this sector as well as any other. The association between rising incomes and improved state and private spending on environmental protection tends to be a long term one and short term employment creation may not result.

The conclusion reached in this paper is that the EU's strategy needs to be more widely based than it is currently. Other policy tools which are also available (the use of environmental policy instruments such as the LIFE programme and the reallocation of Green Taxes in order to generate a "double dividend") must be used more effectively alongside the introduction of regulation. The double dividend will be achieved by using the tax system to encourage environmentally practices, whilst at the same time using the revenue to lower the social costs of employment. The overall competitiveness of industry must be enhanced. The problems of employment creation and rising aspirations for environmental protection cannot be simply squared without difficult choices being made about a trade off between the two in the short-term and these other strategies being put into place to complement them.

### **The Scale of the Unemployment Problem**

It is now recognised that the EU and the Member States have a shared responsibility to attempt to introduce measures to reduce the level of unemployment within the EU. "Member States and the Community shall ..... work towards developing a co-ordinated strategy for employment..." Article 125 TEC. The new Employment Chapter places the responsibility for providing jobs and reducing unemployment with the Member States. It is the Member States who have the responsibility for developing practical solutions in co-operation with employers, trade unions and other economic actors. The EU's role is to encourage the co-operation between the Member States and support and complement actions which are being taken. Article 127 TEC. This role for the EU has been articulated over a number of European Summit meetings since the adoption of the Employment Strategy during the Luxembourg Summit in 1997 (cf. Table 1).

The EU's role is to;

- Create the overall economic conditions to promote growth, competitiveness and employment.
- Co-ordinate macroeconomic and structural policies at the European level
- Support to national policies, for example through the Structural Funds.

**Table 1 Steps taken to implement the Employment Strategy “the Luxembourg Process”**

Date	
15 <sup>th</sup> December 1997	Council adopt the Employment Guidelines following revisions made by the European Commission
15 <sup>th</sup> April 1998	Member States submit National Action Plans (NAPs) to the Commission
15 <sup>th</sup> May 1998	Commission present evaluation of National Action Plans
15 <sup>th</sup> June 1998	National action Plans reviewed at Cardiff Council
9 <sup>th</sup> July 1998	Ministers of Employment, Social Affairs and Equal Opportunities discuss NAPs
31 <sup>st</sup> July 1998	National governments present implementation plans to Commission
14 <sup>th</sup> October 1998	National governments adopt 1998 Joint Employment Report
22 <sup>nd</sup> February 1999	Adoption of the 1999 Employment Guidelines

Source Adapted from CEC 1998g:2/3, OJ 1999a C 69 Volume 2

Although the level of unemployment is a common concern, it is difficult to envisage a common solution that will apply equally effectively to all member States and their regions. The National Action Plans for Employment (NAPs) which were presented to the Cardiff Summit in June 1998 showed that different methods were being used by the national governments. They did however contain a number of common themes. It was generally accepted that higher levels of economic growth were required as the underpinning to ensure the success of any measures which were introduced. In addition that there should be a concentration on developing a flexible and well-trained workforce. In recognition of the rapid changes in technology being introduced into the work place the NAPs also emphasised the importance of improving knowledge and skills levels in order to reinforce the employability and adaptability of the labour force (CEC 1998g:3)

The rate of economic growth in the EU has been slow throughout the 1990s. As a consequence in the early 1990s half the jobs (4.9 million between 1991 and 1994) which had been created in the 1980s were lost (CEC 1998c:1) This led to a situation where the average level of unemployment rose above 11 percent for the first time in 1994 (CEC 1998d:1) As can be seen from **Table 2 Growth and Employment** the EU's performance was also poor during this period when compared to the United States and Japan. The average growth rate during the period from 1991 – 1998 in the US was 2.6% of real GDP with an average employment creation rate of 1.5%. If the EU had been able to mimic this rate of employment creation during the same period then 10 million jobs would have been created.

During the latter half of the 1990s half of the jobs lost in the early 1990s have been made up in the EU. 149 million are in active employment, with 62 % of the additional jobs created being for women. Despite this improvement the same picture of slower growth and lower levels of job creation are evident for the EU than either the US or Japan in the later part of the 1990s as they were in the early part. Although Japan

experienced increasing economic difficulties during 1998 the forecast is of growth in the Japanese economy towards the end of 1999.

**Table 2 Growth and employment EUROPE, USA and Japan**

(Average annual percentage change)

Real GDP growth	1974-85	1986-90	1991-96
EUR	2.0	3.3	1.5
USA	2.3	2.8	2.3
Japan	3.4	4.6	1.7
Employment growth <sup>1)</sup>	1974-85	1986-90	1991-96
EUR	0.0	1.3	-0.4
USA	1.8	2.1	1.2
Japan	0.7	1.0	0.7

<sup>1)</sup> National accounts definition. Source: CEC 1998c

**Table 3 Unemployment rates (%) in February 1999 & January 1999 in ascending order**

	Feb 99	Jan 99		Feb 99	Jan 99
<b>Luxembourg</b>	2.8	2.8	<b>Belgium</b>	8.4	8.4
<b>Netherlands</b>	:	3.4	<b>Germany</b>	9.0	9.0
<b>Portugal</b>	4.2	4.3	<b>EU15</b>	9.6	9.6
<b>Austria</b>	4.6	4.6	<b>Euro-zone</b>	10.5	10.5
<b>Denmark</b>	:	4.9	<b>Finland</b>	10.8	10.8
<b>UK</b>	:	6.3 (12/98)	<b>France</b>	11.4	11.4
<b>Ireland</b>	7.0	7.2	<b>Italy</b>	:	12.0
<b>Sweden</b>	:	7.6	<b>Spain</b>	17.6	17.8
			<b>US</b>	4.4	4.3
			<b>Japan</b>	:	4.4

Source: Adapted from Eurostat News Release xx/99, 9<sup>th</sup> April 1999

: data unavailable, latest available figure included in table, data for Greece not available

In February 1999 the Eurozone's <sup>5</sup> seasonally adjusted unemployment rate fell to 10.5% compared with 11.2% in February 1998 (cf **Table 3 Unemployment rates in ascending order**). The average rate for the EU 15 was 9.6% compared with 10.2% in January 1998. This was regarded as something of a triumph, given that these levels were the lowest achieved since 1990. The rate varied considerably with Spain having the highest level (17.6 percent) compared to Luxembourg with 2.8 percent. Whilst the overall total had fallen Europe's performance is still considerably inferior to that of the US (4.4 % in February 1999) and Japan (4.4% in January 1999). The overall figures mask the problem of the high unemployment rate for the under-25s (Eurozone 20.4 % January 1999, EU 15 19.1%). Persistent long term unemployment also does

<sup>5</sup> Eurozone the 11 member states whose currencies formed the Single Currency in January 1999.



not manifest itself in these collated average figures. The numbers of those in employment in February 1999 in the Eurozone were estimated to be 13.5 million, 16.3 million in the EU! %.

**Table 4 Main features of spring economic forecasts, EU 15**

	1996	1997	1998	1999	2000*forecast
<b>GDP growth</b>	1.8	2.7	2.9	2.1	2.7
<b>Employment creation %</b>	0.3	0.5	1.1	0.8	0.8
<b>Unemployment rate, % of the labour force</b>	10.9	10.6	10.0	9.6	9.2

Adapted from CEC 1999c

In contrast the unemployment rates in the US and Japan were considerably lower (US 4.4 % in February 1999 and 4.4 % in Japan in January 1999). The same problem of higher rates of unemployment amongst those under 25 was also evident in both countries (US, 10.2 % in February and Japan 8.6% in January). However the rates were not as high as in the EU and the US economy in particular throughout the 1990s has been able to generate employment in a way which the EU has not. The Commission in presenting the economic forecast for spring 1999 (cf **Table 4. Main features of spring economic forecasts in the EU 15**) concluded that at 1.1 % the rate of employment creation during 1998 had been strong (CEC 1999c:2) but there was evidence of a slow down in 1999 reducing the level of employment creation to 0.8%. During the period 1999-2000 it was estimated that about 2.5 million jobs would be created with only a limited negative impact on current rates of employment from the slower growth in the economy.

The penalty the high rates of unemployment impose on the EU's economy is that;

- It is a drain on the Member States economies equal to more than 4% of the total GDP of the EU or equivalent to the total GDP of Belgium.
- It has been more difficult for many national governments to reduce their budget deficits because of rising social costs and falling revenues.

The increase in European unemployment over the last 25 years has centred on the recessions of 1974-76, 1980-82 and 1992-94. During these periods the labour market rigidities, high social costs and high taxation policies of the EU Member States have remained broadly the same. This has not been the case in either the US or Japan. As a result Europe's place in the world market has become increasingly under threat from other producers in the global economy. After each of these recessions the residual unemployment within the system remained at a higher level than before. This has left a larger core of longer-term unemployed, which poses problems for particular Member States and specific regions.

One of the reasons why unemployment fails to decline after a recession could be explained by the fact that many unemployed workers experience a loss of skills. Consequently they may be pushed down the skills ladder when the economy turns up again and may find it difficult to re-establish themselves, and so fall into the long-

term unemployment trap. In such cases, better training opportunities are essential to counteract this tendency. The employment impact of new technological developments is also reliant on the skills set available in a population and the retraining needs. If new developments in eco-technology are to contribute to the employment creation process there will be a requirement for skilled workers in the same way as any other new innovative technology developments. In addition to the shortage of an appropriately skilled workforce there is a view that the real problems undermining the creation of employment in the EU are the high minimum wages, the high non-wage costs on employers and high marginal tax rates within the EU 15. It is also argued by some national governments that workers have less incentive to seek work where unemployment benefits are high. Furthermore providing a high level of job protection to workers acts as a disincentive to employers to create new jobs.

### **The Employment Chapter**

What does the chapter contain? What are the opportunities for the Commission to perform a dynamic role mobilising the national governments to action? The Employment Chapter (Title VIII) includes the following in its provisions:-

- Article 125 calls for the Member states and the EU to work towards creating a co-ordinated employment strategy. This would have a particular emphasis on the supply side of the economy, by promoting skills and an adaptable labour market.
- Article 126 emphasises that employment policies are a matter of common concern
- Article 127 gives the EU a role in encouraging co-operation, and stresses its importance within the framework of EU policies
- Article 128 instructs the European Council to consider the employment situation on the basis of an annual report. After consultation with the European Parliament, the Economic and Social Committee, the Committee of the Regions and the Employment Committee guidelines are to be constructed which the Member States are expected to take into account in their employment policies. The Member States are then expected to produce an annual report showing how they have implemented the guidelines, which in turn will be scrutinised by the Council. This will then be the subject of an annual report.
- Article 129 suggests that incentives to encourage co-operation may be adopted. This gives scope for the development of pilot projects and the exchange of best practice.
- Article 130 called for the establishment of an Employment Committee with advisory status to promote co-ordination between Member States on employment and labour market policies. The Committee is to consult with management and labour, with the each Member States and the Commission having two members. The Committee's task is to
  - Monitor the employment situation and employment policies in the Member States and the EU.
  - Formulate opinions at the request of either the Council or the Commission or

on its own initiative.

The inclusion of the Chapter into the Treaty does provide the EU with a method of tackling EU wide unemployment which has a legal basis but the method itself may be criticised as it does not lend itself to a radical strategy. The Employment Committee has a role in co-ordination of the employment strategy. Potentially this could be a strong measure as it is one way of overseeing the extent to which employment objectives are taken into account in all EU policies. However the European Commissions attempts to introduce an action plan to identify how this may be done have been frustrated by the events surrounding the resignation of the entire College of the Commissioners in March 1999 (cf discussion on page 13). The 1997 Communication document produced by the Commission on employment creation and the environment also hardly points the way forward in terms of stringent and radical ways in which the two sets of objectives could be integrated.

Although the Amsterdam Treaty was not ratified until May 1<sup>st</sup> 1999 because of the seriousness of the problem of unemployment the European Commission was asked to initiate the programme of joint annual reports on the Employment situation which were required under the terms of the new Treaty chapter in 1997. As the first step in this process the Commission published a series of Guidelines on Employment Creation which were adopted by the Council of Ministers in December 1997 (cf note 5). The conclusions reached in these guidelines were that some strategies were more likely to work at the national level than others. The Commission identified a number of suitable strategies including; improving the employability of manpower, promoting entrepreneurship and strengthening policies for equal opportunities, and encouraging the adaptability of businesses and their employees. The national governments were required to present National Action Plans for Employment (NAPs) based on these guidelines by summer 1998.

Immediately there was evidence that not all the national governments were committed to the implications of the new Treaty Chapter. The Commission is reliant on information being made available by the national governments in the compilation of assessments and reports. The Member States often hinder the development of policy initiatives by not making information available on time, or by providing information which is not compatible. This was evident when the Commission began to evaluate the NAPs in the summer of 1998. Although guidelines had been issued to the national governments some of the Plans were inadequate for the purpose of evaluation and had to be referred back to the national governments.

The EU's strategy to create employment set out in the Commission Guidelines and the National Action Plans is a multiannual process and the national governments were required to respond to this by introducing an appropriate national infrastructure to support the implementation of the measures in the NAPs. By the time of the publication of the 1998 Joint Report on Employment the majority of the member states had established the necessary and specific inter-departmental structures (Portugal, Finland, Belgium, Greece, Spain, Ireland, Luxembourg, Austria and Italy). Many of the NAPs targeted the young and long term unemployed. Many of the Member states identified the service sector as the area of economic activity most likely to produce new employment especially the social services providing care for groups such as the elderly. The German NAP identified the private household sector

of employment for national support. In limited number of cases investment in high technology industry was advocated (e.g. Austria). The national governments did not however directly support the development of either eco-technology or environment related industry as job creating. An indirect impact in France may come from the inclusion of environment services as part of the programme for New Service, New Jobs initiated by the French government. However the overall conclusion to be drawn from the NAPs was that there was mere lip service being paid to the linkage of employment creation and environmental protection in the Member States of the EU.

The European Commission supported the view that the national governments should have freedom to adopt the mix of policies, which were most appropriate for the individual national circumstances, and that it is the outcome, which matters, in the long term. However the failure to make consistent national strategies a compulsory element of the implementation of the Employment Chapter made comparisons between the national approaches very difficult. For example the French introduction of a 35 hour week, is a very "hands on" approach to create more employment. Doubts were expressed by the Commission about the value of compulsory reduction in working time. Reducing or controlling the hours worked would be acceptable if they were part of any dividend which may be gained as a result of economic growth and additional employment created as a result. It cannot easily be evaluated against a more market-based solution adopted by other states such as the UK and Germany where labour market flexibility including the organisation of working time is stressed.

The development of a more flexible organisation of working time by whatever the means is likely to have an impact on the natural environment by changes in transport demand (CEC 1997e:18) It may be possible to introduce more effective measures to control peak flows and traffic congestion if there is a more flexible arrangement with regard to the organisation of working time. The environmental impact can be either positive or negative, depending in particular on individual working time arrangements, the transport infrastructure and the location of the work place. If these advantages are to be gained it will be necessary to accurately identify the environmental impact of the new forms of work organisation.

A positive employment creation impact from increased flexibility of working time will only follow if other measures are introduced which reduce the non-wage labour costs associated with employment. The health and safety of workers has continued to be of concern and the Commission made a number of proposals to extend the Working Time Directive<sup>6</sup> as a consequence in 1997. The rationale for the Working Time Directive is of course one of safety and health of workers rather than enabling job creation or the introduction of more flexibility into the labour market. Many employers view the Working Time Directive as an example of the rigidities in the labour market which the EU is responsible for introducing.

There has to been no attempt to harmonise the labour laws and regulations of the Member States in the development of the Employment Strategy since 1997. The advantage of the measures which have been taken as a result of the inclusion of the Employment Chapter to the Treaty include the more comprehensive nature of the consultation process amongst the Member States. Quantifiable targets are still not a

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<sup>6</sup> Directive 93/104/EC on Working Time, CEC (1997) Communication on the sectors and activities excluded from the Working Time Directive COM (97) 334

common feature of all the National Action Plans but the Commission in the 1999 Employment Guidelines has invited the Member States to set themselves national quantifiable targets where possible to do so.

Many of the measures to stimulate employment will rely on funding being made available. During the Amsterdam Summit in June 1997 the new strategy for investment to support these initiatives was agreed. The financing of any proposals that result from the new Employment chapter of the Treaty is contingent upon money being made available from within the existing EU budget. A loan facility of £700 million from the European Investment Bank was agreed in 1997. This facility may be expanded. Other financing will follow from the reform of the Structural Funds which has included a re-organisation of the major objectives for action from the existing 6 to 3 to ensure that the human resource problem is more directly targeted. However during the Berlin Summit in March 1999 the national governments did not agree to significantly increase the EU's Budget for the planning period to 2006.

The 1999 Employment Guidelines have again returned to the importance of integration of environmental objectives to national employment creation policies. (It is however listed as point 14 of the 18 issues raised!). The Employment Guidelines have been adopted by the Council of Ministers (OJ 1999a). Little support has been given in the Employment Guidelines about how the linkage is to be made. Other measures which would have supported the Employment Guidelines such as funding are not in place. Also amongst these measures not yet in place is an action plan to ensure that job creation initiatives are included in all areas of EU policy. The resignation of the College of the Commissioners on March 16<sup>th</sup> 1999 after the presentation of the damning Report of the Committee of Independent Experts delayed the publication of the action plan.

The plan was due to be debated by the College of Commissioners in late April 1999 but concerns were raised about its inclusion on the agenda for the Commission's discussions. Three areas of concern were evident. Firstly that the publication of this plan contravened the Commission's own commitment not to introduce any new legislative proposals whilst they remained in a caretaker role. Secondly that as the range of proposals being made in the plan were based on the Treaty of Amsterdam it would have been more appropriate to wait until after the ratification of the Treaty. Thirdly that the proposals would result in more legislation which could be seen as an additional burden on industrialists. Support from the national governments was evident to leave the pattern of drafting broad economic guidelines for policy with annual employment guidelines as it was. The view of Commissioner Padraig Flynn and the officials of DG V were that there were no legislative proposals in the plan The Treaty versus the "Ideal World" which would be restrictive and that it was continuing with already existing initiatives. If that is the case then the action plan will hardly point the way in terms of either stringent action or radical proposals.

### **Eco Strategies**

The 1998 Report on the Competitiveness of European Industry (CEC 1999b) begins with the overall conclusion that the competitiveness of firms is crucial to their success. It is also crucial to the success of any measures to create employment. An uncompetitive firm will not be in a position to offer new employment opportunities. Successful firms are those where jobs will be created but this may not be the outcome

in the short term. There are three broad elements to a definition of competitiveness - productivity, efficiency and profitability. At the macro level economic indicators of competitiveness include growth, productivity and employment. The structure of economic activity changes with various stages of economic growth. In advanced market economies the drive to produce at low cost puts a premium on energy efficiency and reducing material efficiency. Technology changes as the economies expand and further changes are likely to reduce the pollution costs per unit of product. As income levels rise in an economy then the service sector becomes more important. This will have a two-fold impact on the environment. Firstly the service sector is generally characterised by low pollution levels per unit of production. Therefore as income levels rise and service activities increase their share in the economy the pollution levels should fall. Secondly there is an apparent correlation between economic growth and a latent desire among the population for clean air and clean water. Willingness to pay for environmental quality comes with increased growth in income.

What is the employment impact? A characteristic of the economy of the EU is that there has been an increase in labour productivity due to the substitution of capital for labour. About 50% of the increase in labour productivity in the EU is the result of capital substitution. The speed at which this occurs will depend on changes in the relative price of wage costs in relation to the user cost of capital (CEC 1999a). The relative price of labour has risen faster in the EU than in the US. A positive outcome for employment creation will result if there was an ability to innovate in the growth areas of the economy which in the case being considered in this paper would include in the areas of eco-technology and the greening of the service sector. During the 1990s the ability of the EU to introduce innovative industries has fallen behind the US which has been able to provide technically advanced industry and to develop its service sector providing a range of skilled and unskilled employment.

At the micro level of an individual company competitiveness also includes market share and profitability (Commission 1996a:3). The issue of competitiveness has to be looked at from two points of view with regard to the potential for job creation from the linkage with environmental protection at the micro level. One question is the extent to which the introduction of environmental protection measures will have an impact on the competitiveness of a company by constraining their share of a particular market or increasing costs and lowering levels of profitability. This will in turn affect their ability to increase the levels of employment offered. The second question is to consider the way in which new developments may enable the growth of employment in those companies that are involved in the production of the new eco-technologies, and the potential of those companies to generate employment.

Some companies have been able to utilise the environmental protection measures which have been introduced (cf. Table 5) These technology based firms are the ones which in the long term will provide employment as they have been able to innovate and provide sustained competitiveness within the market place. However most of the jobs created are in only a small number of the high growth technology based companies. This view means that an adaptation of Darwinist paradigm must be considered. Survival of the fittest company may not be the company which generates the largest amount of permanent employment.

Table 5 Competitive industry and environmental protection – the industrialists dilemma

	<b>Stringent environmental regulations</b>	<b>Weak environmental regulation</b>	<b>Employment creation impact</b>
<b>Innovative and adaptable industry – technology based firms (tbf)</b>	Uses environmental legislation as an opportunity <ul style="list-style-type: none"> <li>• to innovate and increase profitability e.g. energy saving</li> <li>• to develop eco-technology products</li> </ul>		Not a direct result but jobs come from <ul style="list-style-type: none"> <li>• more investment as a result of increased profitability</li> <li>• new products, but with some trade-offs having to be made against the cost of RTD.</li> </ul>
<b>Barely viable and uncompetitive</b>	Loss of competitiveness	'Limps' along	Jobs will be lost as companies become uncompetitive
<b>Uncompetitive industry</b>	Speeds the 'death' of the company	<ul style="list-style-type: none"> <li>• 'Limps' along</li> <li>• Fails completely</li> </ul>	<ul style="list-style-type: none"> <li>• No jobs created</li> <li>• Jobs lost as company closes</li> </ul>

Employment of large numbers of workers may not be either a direct or short term outcome of the ability to innovate. Capital is necessary for technology advanced firms to finance research as well as new product development. Environmentally related employment depends in part on the uses to which resources used by a company to meet environmental improvement demands would have been used to create employment. There will be a negative impact if the resources being used for environmental improvements would have been used to introduce new labour intensive products. Positive employment gain will result if the environmental investment is very labour intensive or triggers innovation in waste reducing technologies which generate or expand a new line of business.

To what extent is the view of industry that competitiveness is undermined by environmental protection measures an accurate one? The evidence is ambiguous. The 'received wisdom' for many firms is that the introduction of environmental protection measures carry costs that are very visible in the short term. This view appears to come from the period of the 1960s when environmental regulation was limited in its extent and there was economic growth taking place in Europe. The costs of complying with environmental measures are viewed as hindering competitiveness. In many instances the potential for benefits from environmental protection measures only becomes visible in the long term and it is often the short term which dominates an industrialists planning. For companies which are not competitive or have been in marginal positions then indeed the imposition of stringent environmental measures may have severe consequences (cf. Table 5).

There is evidence to support the view that jobs are lost in the introduction of such measures. The US has far more in the way of dedicated anti-environmental groups than can be found in Europe. These groups are prepared to fund research into the costs of environmental measures, as a way of offering support to lobbyists. Their activities are seen as adding to the environmental debate, rather than running contrary to the consensus, as might be the case in the EU. This has been seen in the debate concerning the US's commitment to Kyoto Agreement. Under this the US was required to reduce its greenhouse gas emissions to 7 per cent below 1990 levels by 2012 - 16 per cent below current emissions. On the one hand the US government's assessment of the cost of implementing the agreement was put at between \$70 and \$110 per household in any one year. They suggested that costs would be largely offset by the benefits to consumers stemming from the planned deregulation of the electricity industry. An alternative assessment was sponsored by the Global Climate Coalition, an industry-led group opposed to the Kyoto treaty, suggested that it would cost 2.4 million jobs and reduce gross domestic product by as much as \$300bn annually. The survey found that it would cause energy prices to double, with severe implications for the rest of the economy. The need to replace capital equipment and lowering of disposable incomes would result in a real GDP loss of \$2,728 per household by 2010 (Suzman M 1998).

A similar sceptical view also is supported by findings in the UK. In the third of its annual reports ENTEC-UK and the Green Alliance, a UK based green lobby group. This identified a rise in the numbers of large companies citing costs as a limiting factor when implementing environmental programmes. In its 1997 survey 58 % of companies had expressed this view but by mid 1998 this had risen to 73%. (ENDS 3/6/1998). It is extremely difficult to estimate the extent to which company competitiveness will be lost in the long term. What does emerge from much of the evidence presented is that there is a cost disadvantage for many companies from meeting the requirements of environmental protection which has the potential to undermine their ability to provide employment. On the other hand companies are able to make cost savings as the result of less wastage in production processes and lowering of energy usage. However there is no guarantee that new employment will result from a company increasing its profit margins.

Following the introduction of measures which were intended to protect the environment by the UK Chancellor of the Exchequer in the March 1999 Budget there was some evidence of jobs lost in the transport sector as companies relocated outside the UK. Many UK transport companies have been relocating parts of their operations in mainland Europe for some time. In this case the additional taxation burden pushed up the numbers of vehicles which companies are locating outside the UK. Also some companies are beginning to employ other nationalities drivers on their routes eg substitution of Greek and Turkish drivers on the routes to the Balkans and the eastern Mediterranean. The UK Road Haulage Association (with 10,000 members) is noting a high level of interest in "flagging out" to avoid increased costs because of the introduction of a high level of excise duty on HGV fuel as a result of the Budget. The cost of licensing a 40 tonne lorry is £5,750 in UK but only £400 in France. In the case of French vehicles which are more than five years old this drops to £200. There are however other costs of running of an overseas operation - operating depot and licenses, acceptance of different national employment legislation which may limit moves such as this.



To turn to discussion of the potential for job creation in the eco-industries. There is much debate about the employment effect of environmental policy. The Organisation for Economic Co-operation and Development (OECD) concluded in a 1997 report that the result was a small, positive net employment impact from the introduction of environmental policy (OECD 1997a:10). In 1994 the market for eco-industry was valued at \$280 billion globally, with the EU market reaching 90 ECU billion - Germany accounting for one third of that total. Further to that it was expected that globally the eco-industry would grow to US \$ 640 billion in 2010, a growth rate of about 8% per annum. (CEC 1997a:8.note 12). EU estimates suggest that the real growth in EU eco-industries is likely to outstrip that rate of growth in the rest of the economy over the next five years (CEC 1997b:81). The EU currently has a trade surplus in the eco-technologies with the rest of the world equal to 760 mecus per annum.

Whilst the environmental technology industry is becoming increasingly trade oriented it remains less trade intensive than industry dealing with standardised mass products such as cars or computers (OECD 1994). This will have an impact in turn on the opportunities for job creation in the export of environmental technology. The main trading partner for the EU's environmental technology is the US. Evidence to suggest that the eco-technologies are not in the 15 industries with a top share in value added relative to the total of EU-US-Japanese trade (CEC 1999a:41). The trade in eco-technology is also important in only a limited number of EU states particularly in Germany. In 1998 Germany became the world's leading exporter of environmental technology (18.7% of total export trade, US with 18.5% and Japan with 14.5%) Germany also accounts for 50% of the EU's environmental engineering patents and has more than 300 companies involved in the biotechnology sector.

Within the EU the market for eco-technology (cf Table 6) appears to suggest that there was a significant impact to be gained for job creation in the developments which were taking place. The companies involved in the industries are in a limited number of Member States and not in those areas which have the highest rates of unemployment. Evaluation of the potential of the eco industries to provide new jobs is difficult because of problems of identifying and then targeting the industries to support. The central activities of environmental protection are, "...firms producing goods and services capable of measuring, preventing, limiting or correcting environmental damage such as the pollution of water, air, soil as well as waster and noise related problems They include clean technology where pollution and raw materials use is being minimised." (CEC 1994c).

Identified companies are in the following sectors:-

- Air pollution control e.g. production of catalytic converters.
- Waste water treatment e.g. the products and services which are associated with the removal of pollutants from sewage.
- Waste management e.g. products and systems for the collection of municipal, commercial and industrial wastes
- Systems for the reclamation of contaminated land
- Products and services associated with noise abatement
- Environmental research and development

- Environmental monitoring products
- Environmental consultancy services

**Table 7 Market in the EU for eco-technology by % of EU output and industrial turnover as % of EU GDP**

Eco-technology market share of EU output	by % EU output	Turnover of eco-technology industry	% of GDP
Germany	35	Austria	2.3
France	20	Netherlands	2.3
UK	12	Germany	2
Italy	10	France	1.5
Netherlands	8	Sweden	1.5
Austria	4		

Source: Commission 1997a:21

Industries involved within these sectors are considered to be involved in the "core" environmental industries. Other employment may be in activities that are not in one sector of activity but occur in other parts of the economy, for example the adoption of production methods that minimise environmental damage. This is the outcome of structural changes in industry brought about by regulations and other incentives such as state subsidies or tax incentives to reduce resource usage.

Within the EU this positive employment effect was highlighted in the White Paper on Growth, Competitiveness and Employment (CEC 1993:chp 10). Following the adoption of the Fifth Environmental Action Programme in 1992 the Commission supported the view that industrial competitiveness would not be undermined by measures to protect the environment and thus have a negative impact on employment (CEC 1992b). It was in a further attempt to show a positive linkage between employment creation and environmental protection that the joint communication from Ritt Bjerregaard (Environment Commissioner) and Padraig Flynn (Social Affairs Commissioner) was produced in November 1997 (Commission 1997a). The 1999 Employment Guidelines reiterated the commitment to the linkage of the two objectives.

At the national level it is possible to identify a growth in the numbers of people directly employed in these areas (cf. Table 2 and 3 for the national positions in Germany and France).

The direct employment impact of the eco-industries within the EU is estimated to be about 1 million jobs i.e. about 0.7% of total EU employment and providing ECU 90 billion of goods and services per annum. Although it is more difficult to estimate the employment where the environmental impact is less direct, it is possible to conclude that 3.5 million jobs exist within the EU in environment related employment. There is an estimated potential that a further 500,000 could be created by 2010 in renewable energy technology and investments in renovation of housing and public transport adding another 500,000.

**Table 7 Positive employment effects of environmental policies in Germany (000s)**

	1980	1984	1990	1994	2000* Forecast
<b>West Germany</b>	434	433	597	642	786
<b>Directly involved in environmental protection</b>	158	172	255	284	290
<b>Supply of goods and services for environmental protection</b>	*	*	341	358	496
<b>East Germany</b>	*	*	*	314	336
<b>Directly involved in environmental protection</b>	*	*	*	224	66
<b>Supply of goods and services for environmental protection</b>	*	*	*	90	280
<b>Total</b>	434	433	680	956	1122

Source OECD (1997b:36)

**Table 8 Positive employment effects of environmental policies in France (employment in 000s)**

Sectors	1985	1986	1987	1988	1989	1992
<b>Market activities</b>	*	*	*	176.1	179.0	*
<b>Direct employment effects</b>	*	*	*	96.2	98.7	*
<b>Indirect employment effects</b>	*	*	*	75.9	80.3	*
<b>Administration</b>	*	*	*	123.4	124.0	*
<b>In-house production</b>	*	*	*	53.5	56.0	*
<b>Total</b>	343.5	349.2	349.4	353.0	359.0	418.0
<b>% labour force</b>	1.6	1.6	1.6	1.6	1.7	1.9

Source OECD 1997b:37

**Table 9. EU initiatives for job creation**

Target area	Potential for job creation
Environmental protection	Up to 1 million
<ul style="list-style-type: none"> <li>• Maintenance of natural areas and public area (local waste recycling)</li> <li>• Water purification and the cleaning up of polluted areas</li> <li>• Monitoring of quality standards</li> <li>• Energy saving equipment, particularly in housing</li> </ul>	
Improvements in the quality of life	Up to 1 million
<ul style="list-style-type: none"> <li>• Renovation of rundown areas</li> <li>• Development of local public transport services</li> </ul>	
Local Services, Leisure and cultural facilities, Audio-visual	Up to 1 million

Source OECD 1997b:62 (based on Commission 1993c. chp 10)

There are many different types of jobs associated with environmental protection (cf. Table 9). Some employment is to be found in the introduction of new technology that is needed to implement environmental legislation. The response of industry to much environmental regulation in the past has been to adopt end-of-pipe technology. The introduction of these technologies may impose a financial burden on companies, depress competitiveness and result in job losses. This type of end of pipe technology is often the cheapest solution for companies in the short term. Employment may be lost in some companies required to introduce the technology but there are arguments which support the view that it will be created to compensate in the introduction of waste management or treatment technology to a company. There is no conclusive evidence to support this view. For example the introduction of flue gas desulphurisation equipment (FGD) to power stations proved to be both costly (taking around 10-20% of the total capital costs of a power plant) and also caused a reduction in operating efficiency. In a 1995 study of a Japanese company that had been amongst the first to begin commercial production of the technology investment had been required or a period of fifteen years before there was a net return.(CEC 1997d). Of the producing companies labour force of 3000, 200 were directly employed in the production of the technology.

The clean, lean technologies on the other hand have long term environmental benefits. These technologies are designed to minimise the use of materials and to reduce the production of waste. Much research and development effort surrounds the introduction of this type of technology. The result is also likely to be that energy use is reduced as well as costs for raw materials. The primary objective of these measures is to improve process efficiency. Consequently the environment is protected, and at the same time there are clear long term cost advantages for companies. This will only translate into job creation under specific conditions. The job creation potential of clean technologies is dependent upon a number of factors including the competitiveness of the companies involved.

For a company involved in the production of the eco-technology there is a "first mover" advantage to be gained from being the first to supply the technology. Table 5 shows the way in which technology forward firms are able to take advantage of being amongst the first to innovate as a result of the environmental measures. The overall competitiveness of the company will be strengthened as a result if any increase of price which might have to be passed onto the consumer is small. It may not increase competitiveness if the price is perceived to be unacceptably high. Maintaining competitiveness is also crucially dependent upon other countries or companies being obliged to use the technology which has been pioneered. If that does not happen then companies can be left bearing higher costs for long periods of time and with diminished competitiveness.

There is evidence which would suggest that pollution levels within the EU are less than those in the US both per head of population and in terms of emissions expressed per unit of GDP (CEC 1999b). The following conclusions may be drawn from Table 10 that the lower levels of environmental pollution are an indicator of the environmental efficiency of production. In that case it may be that the EU has reached the point at which the 'first mover' advantage for the producers of eco-technology is close to being lost and with it the job creation potential.

**Table 10 Environmental Pollution**

Country/region	Emissions 1995	Emissions 1995	Emissions 1995
	per capita	per capita	per capita
	Tonnes of CO <sub>2</sub>	Kg of SO <sub>2</sub>	Kg of NO <sub>x</sub>
EU 15	8.9	31.3	32.7
Japan	9.2	7.2	11.1
USA	19.9	63.1	75.1

Source (OECD, IFO calculations quoted in CEC 1999b:10)

The EU's strategy needs to be viewed more widely based than it is currently. Environmentally efficient methods of production rely on the nature of the energy resources being used and the structure of the industry itself. Research into developments in eco-technology especially renewable energy technology is therefore of vital importance.

The EU is attempting to provide a framework for support for the development of eco-technology. It is possible to do this through funding for research and development programmes or by the reduction of controls on state aid to some sectors of industry. A database of 2,100 companies which were involved in the production of more than 60 different environmental technologies and products and services within the EU was established in 1997 amongst the initiatives to support eco-technology developments. The purpose of the database was to collate information about companies and use the information in the preparation and evaluation of policy in the core areas of environmental protection technologies. The database was no means definitive as there are between 20,000 and 30,000 large and small companies involved in these eco industries within the EU! The value of the database may come in the future from the information which it is able to provide to help with future developments.

In the Fifth Framework Programme on Research, Technology and Development environmental protection was identified as an important area for support. "The strategic goal of this part of the programme is to promote environmental science and technology so as to improve our quality of life and boost growth competitiveness and employment, while meeting the need for sustainable management of resources and protection of the environment in line with the goals and objectives and of the fifth action programme on the environment as well as other Community policies relating to the environment" (OJ 1999b:13). This is not a strategic goal but a wish list of what may be achieved. A number of criticisms may be made of initiatives such as the Fifth Framework Programme not least of which is the level of funding and the appropriateness of the EU's involvement in RTD. In giving its opinion on the Commission Communication "Reinforcing cohesion and competitiveness through research, technological development and innovation the Economic and Social Committee (ECOSOC) the conclusion was reached that "In Europe, scientific excellence has not been accompanied by a capacity to translate it into industrial and commercial success at market level." (CEC 1999d:14). Unfortunately this is what will create the employment. The ECOSOC report further concluded that the problem was two fold. Firstly that financial investment in production rationalisation had been favoured over job-creating investment. Secondly that support was focused on the less favoured regions of the EU. The geographical spread of eco-technology developments

is for the focus to be directed towards the more developed regions of the EU. The RTD effort may not result in many jobs created as a consequence of the failure to work within the realities of the market for the products in the EU.

**Table 11 Budget for the Fifth Framework Programme for Research and Technology Development 1998-2002**

EC framework programme	Budget in millions of euros
<b>Thematic programmes</b>	
Quality of life and living resources	2413
Creating a user friendly information society	3600
Promoting competitive and sustainable growth	2705
Energy, environment and sustainable development	2125
Energy, environment and sustainable development - EURATOM	979
<b>Horizontal programmes</b>	
International role of Community research	475
Promoting innovation and the participation of SMEs	363
Improving human research potential and the socio-economic knowledge base	1280
<b>Joint Research Centre</b>	1020
<b>Total</b>	<b>14960</b>

Source Council common position adopted 12<sup>th</sup> February 1998

More than 70 million people within the EU are in employment provided by small and medium sized enterprises (SMEs). The percentage of the work force in these companies varies from Member State to Member State with the largest percentage in Greece (cf Table 13). Of these companies a high proportion have less than 10 employees (cf Table 13).

**Table 12 Number of small and medium sized businesses in the EU 1996**

	Very small	Small	Medium	Total
No. of enterprises (1000)	17,285	1,105	165	18,555
Employment (1000)	37,000	21,000	15,070	73,180
Average size of enterprise	2	20	90	4
Turnover per enterprise (mecu)	0.2	3.0	16.0	0.5

Source: European Voice 26/02/1998:27

Many companies which are involved in the eco -industries are in this sector. The European Commission (CEC 1997:9) view is that as a consequence of reorganisation of work and enterprises will release more employment to the SMEs in the form of subcontracting from larger organisations. The employment effect of the linkage with environmental protection will therefore be seen mainly in SMEs under certain conditions. However they are subject to the same concerns about costs and loss of competitiveness as larger enterprises. About 50% of SMEs do not survive beyond the

first five years of operation. The technology firms are in the sector which do have a higher than average survival rate and are able to generate stable and highly qualified employment but this does not generate employment in large numbers.

**Table 13 % total employment in firms of 0 to 9 employees (in descending order)**

<b>Greece</b>	<b>56.6</b>	<b>UK</b>	<b>28.9</b>
<b>Italy</b>	<b>47.8</b>	<b>Sweden</b>	<b>26.7</b>
<b>Spain</b>	<b>47.5</b>	<b>Netherlands</b>	<b>26.0</b>
<b>Belgium</b>	<b>45.8</b>	<b>Finland</b>	<b>24.6</b>
<b>Portugal</b>	<b>38.4</b>	<b>Austria</b>	<b>24.0</b>
<b>EU15</b>	<b>32.8</b>	<b>Germany</b>	<b>23.5</b>
<b>France</b>	<b>32.4</b>	<b>Luxembourg</b>	<b>22.9</b>
<b>Denmark</b>	<b>29.0</b>	<b>Ireland</b>	<b>22.7</b>

Source EUROSTAT Memo 10/3/1999, no 01/99

The consumer drives the developments in the SMEs. A great part of the advantage which small businesses have lies in their ability to innovate and to be flexible in their production systems to react to the changing patterns of consumer demand. Lack of a coherent and clearly defined EU consumer policy, based on accurate information being available may be seen as a limit to their competitiveness. The public has to be encouraged to ask for environmentally friendly products and increased production will lead in turn to the creation of jobs. Whilst there is a growth of environmental awareness and increased interest in the purchasing of the so called "green products" it must also be acknowledged that there is some evidence which suggests consumers do one thing and say another (UK NCC 1996:4)

The categorisation of small and medium sized enterprises together may often cause problems in the development of policy as on the one hand it includes very many small concerns which employ less than 10 workers and may be family run businesses (cf Table 13). In the UK for example more than 95 % of companies employ less than 50 people of which some 28.9% employ less than 9 employees. On the other hand an SME company may involve several hundred employees of branches of multi-national companies. For the smaller company, because of the size of the enterprise, compliance with environmental legislation will have a disproportionately greater impact than on the subsidiary of a multinational. Ensuring that SMEs remain competitive also involves them in disproportionately higher research and development costs. The SMEs are thus put in the position of trying to reconcile the needs of a competitive market, low cost production requirements and high costs of environmental improvements. The main question for small and medium sized enterprises is who should shoulder these costs. If higher unit costs are, or perceived to be, a result of the introduction of environmental procedures the SMEs will try to find ways to avoid compliance with that legislation.

The concern which the SMEs have about the financial implications of compliance

with environmental legislation have been recognised by the EU. The overall conclusion of the Commission about where support for SMEs should come from is that it is an issue for national governments to deal with. Furthermore, that within the context of increased economic growth within the EU, there will be an opportunity for the SMEs to benefit without specific measures being introduced. This does not mean that the concerns of SMEs are being ignored by the EU. A number of measures have been put into place to assist the SMEs and new initiatives are being included in legislation which has been adopted since the mid 1990s. In 1995 the European Union launched the "Environment and Growth Initiative for SMEs" which was allocated 9 million ECU from the Budget for the purpose of supporting small firms which were carrying out investments which would either contribute to energy savings or environmental improvements. During the planning period from 1993-1999 1 billion ECUs (1993-1999) were set aside within the Structural Funds for support to national programmes intended to assist with developments within SMEs. In 1994 the Commission initiated the "Integrated Programme for SMEs and the Craft Sector" in which the job creation potential of the eco-technologies was highlighted.

Informing companies of the implications of legislation and involving them in consultation is considered by the Commission to be the role of national authorities. Uncertainty about the meaning of legislation is a concern for the SMEs as it is for the larger companies. The benefits of face to face consultation between the policy makers and the representatives of industry about the costs of compliance with legislation are clear. The SMEs are however less likely to be large enough to maintain their own environmental division or staff to identify the implications of the legislation. They are reliant on other agencies for the information. A complaint made by some SMEs is that in some instances the national officials to whom they turn are themselves unsure of the full implications of legislation. In its Progress report on the implementation of the Fifth EAP in 1996 a survey undertaken on behalf of the Commission led to the conclusion that the national governments weren't addressing the needs of the SMEs. (CEC 1996a:10)

In order to try to alleviate some of this problem legislation has begun to be drafted and prepared by the Commission including an assessment of how the proposals would affect SMEs. When the Directive on Integrated Pollution Control EC 96/61 was adopted in 1996 it introduced specific measures which had an impact on the SMEs sector. The smaller companies were exempted from the legislation and medium companies were only affected by the legislation if they had a significant pollution potential. In the proposals made at the end of 1997 on the Directive for the disposal of end of life vehicles (CEC 1997f:31) a section was included which identified measures which could be taken to minimise any adverse impacts of the legislation on the SMEs.

The proposed Directive attempts to deal in a very direct way with the concerns of the SMEs. Problems of consultation were overcome to some extent because trade organisations representing small companies were targeted. Information was made readily and clearly available in the legislation to explain what the SMEs had to do to implement it. Producers of cars, apart from a few very specialist companies are very large scale enterprises located in a small number of Member States, but those involved in the disposal of vehicles may include many small companies scattered throughout all the States. Two proposals were made in the "end of life" directive



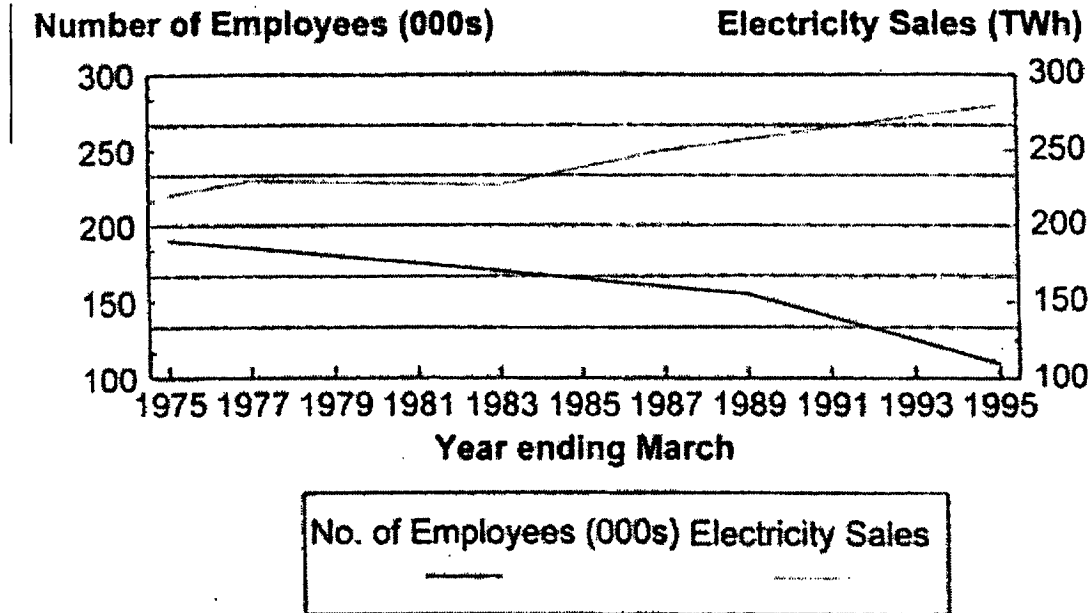
following extensive discussion between a large number of organisations representing these companies and the Commission to assist them in the introduction of this legislation. Firstly that more time should be given to enable them to introduce the requisite disposal procedures. Secondly two and three wheeled vehicles and special purpose vehicles were also exempted from two of the articles of the legislation.

Employment creation may be helped by investments made from the EU. A number of studies have been carried out which attempt to quantify the cost of jobs created which have received funding either wholly or partially from the EU's funds. For example

1. Analysis of the LIFE Nature programme for 1996 projects - 63 projects with a value of 45 MECU created 500 full time job equivalent. The projects had an average life of 3.3 years. Each job therefore cost around 30,000 ECU (DG XI Survey 1997)
2. In an analysis of projects carried out in Objective 1 regions in the context of ENVIREG in 1993 - the total investment of 627 MECU had created around 5,400 jobs. They were in sectors such as urban wastewater treatment, municipal solid waste management and public water supply. An investment of 116 thousand ECU for each job. (DG XVI/ECOTEC Survey 1993)
3. Within the context of THERMIE a proposal for upgrading of all single glazed windows in the EU housing stock to high performance double-glazing is considered to bring a double benefit as it would enable energy to be conserved and create employment. Investment required 84 million ECUS creating 127,000 for 10 years.  
(CEC 1997d)

In their joint communication (CEC 1997a) officials of DG V and XI have identified a number of areas where the linkage of employment and environment will have a positive impact on job creation. They include renewable energies, changes to agricultural practices, changes in consumer demands, developments in urban areas and the construction industry. Each of these must be treated circumspectly as employment creation potential in each sector depends on the competitiveness of the companies involved. There is no guarantee that employment creation will follow from developments which are taking place. Restructuring in a sector or a company does not necessarily result in new employment creation. The main questions which have to be asked are where investment is to come from and what type of employment is to be created.

In the case of employment in the renewable energy sector, DG XVII (Energy) is engaged in modelling based on the use of renewable energy. The Commission view is that by the year 2002 the EU should move to 12% of energy needs being met from renewable sources. Estimates suggest that if this is done a million jobs will result. The current level of energy production in the renewable sector is about 6% of the EU's domestic requirements for energy. The downside of such a change is that it requires massive investment to be carried out.

**Graph 1 Number of employees and electricity sales 1975-1995**

Source Club de Bruxelles (1996)

In Graph 1 the lower line represents the numbers of employees in the electricity sales industry, the upper line the numbers of those employed. It would appear that fewer employees are now needed in electricity sales than twenty years ago. If that is the case then increasing our use of renewable energy resources may not provide large numbers of jobs especially in view of the technology advances which are being made in the sector.

Within DGV (Social Affairs) of the European Commission there is a great deal of concern to establish a sustainable strategy which would have an impact on the environment and on employment. Its officials support a move away from end pipe solutions to environmental problems as the way to ensure that job creation follows. The question which is being asked within DG5 is "Is it possible to renew capital stock and move to clean and integrated technologies?". Process innovation is difficult to persuade industry to engage in. It is based on a long term strategy which requires a longer time scale than end of pipe technology. It is difficult to quantify in terms of human resource and training. It requires flexible competence from the labour force. It is important however, to ensure that this is not viewed as flexibility in terms of the use of workers and their hours. It should be much more associated with the skills and competencies which a worker has and their ability to be able to transfer their skills to another sector.

As a consequence the employment impact which environmental technology has is most likely to be on those who are in employment. They are the ones who will be likely to receive re-training in order to move into a different type of work of the same company. The same groups of people will remain excluded from the labour market. It is not possible to bring some people into employment. This will not be the case for all sectors of the unemployed population. Those that are excluded from the labour market as a result of structural change in employment experience more difficulties than those who are moving within a sector. In a modern industrialised economy there is also a recognition of the fact that re-training is essential throughout the working life

of for most individuals. Schemes for re-structuring of employment require subsidies. They are most likely to come from the local level. The EU does help with set up costs for companies but not working costs. If a company does receive funding as soon as a company comes to the end of it's contract and it's funding it must demonstrate that it is able and viable for the future.

Greener jobs are assumed to be more labour intensive and also to absorb some of the less skilled of the unemployed groups (this is not necessarily the case). In re-use sectors there is clearly an opportunity for lower skilled work to be provided. Recycling technology on the other hand is likely to require more skilled people as technicians and skilled operators. The construction industry has been emphasised in the proposals which were made by the Commission in late 1997. It does provide 10% of the labour force. There are opportunities for recycling and re-using from the industry. Urban renewal schemes are begin encouraged by all the national governments with funding opportunities being sought in the public and the private sector investment. The construction industry would therefore appear to be an important sector where environmental employment may be created. This does not recognise the fact that the construction industry responds very rapidly to changes in the economic development. Growth in the construction industry will only come if there is growth in European economy anyway.

Employment creation dominates the agendas of governments as well as individuals. It does not however appear to have dominated the Commission 1997 Communication. Of the two issues - employment creation and environmental protection - environmental protection appears to have the more prominent place. This may be seen in the somewhat unrealistic view that agricultural developments may provide employment. There may be opportunities to establish a positive linkage as greater diversification is introduced into the industry. However the agricultural sector is contracting anyway in terms of employment although retaining its share of economic growth and development. Agricultural incomes are falling in many of the more advanced agricultural regions of the EU and as a consequence fewer workers are interested in entering the sector. Much employment in the agricultural sector tends to be low skilled. On the other hand the calls for more environmental protection measure sot be introduced to agriculture are continuing and support growing.

### **Green taxes**

The demand for the introduction of eco-taxes in order to create "green jobs" has been growing within the institutions of the EU (European Parliament 1998). However such strategies have found only limited support among the Member States. The 5<sup>th</sup> Environmental Action Programme recommended a greater use of environmental taxes, little progress has been made in implementing them at the EU level. In their study of eco-taxes the European Environmental Agency (EEA) pointed out that the use of taxes at the Member States level increased substantially in the period from 1990 - 1996 (EEA 1996). However as a proportion of overall taxes, eco-taxes only amount to 1.5 % of the total, but if energy taxes are taken into account, this percentage rises to 5.2%. In some countries it was higher for example in the Netherlands and Denmark where it was respectively by 1.5% and 4%. Energy taxes have however proved to be more important accounting for 5.2% of all EU taxes. In Portugal and Greece, they represented 10% of all taxes, whilst in Italy and the UK it was between 6 and 7% (Chemical Business News Base, 1996). The reason for

reluctance to introduce environmental taxes is their perceived impact upon competitiveness employment and the distribution of income.

The EEA suggests that a well-designed tax could stimulate competitiveness, and in a study of 16 environmental taxes, they found that these were environmentally effective at a reasonable cost (EEA 1996:52-61). The EEA found that certain taxes at the national level are particularly important in reducing environmental problems. For example, a Danish scheme to place a charge on the disposal (via dumping and incineration) of non-hazardous waste was found to have made a significant contribution towards encouraging the recycling of waste. However, a Swedish levy on lead batteries had only a limited impact, because a viable alternative product was not available. A Dutch levy on aircraft noise also had a very limited effect on noise levels, although it was successful in raising revenue. The EEA believes that the use of eco-taxes have a multiple dividend and they propose that their use be extended, by adopting them in more European countries, increasing their harmonisation and compatibility at the EU level, and developing a new tax base. This might mean that eco-taxes taxes might apply to transport tourism, land management, water and mineral resources.

There are substantial problems in realising the double dividend because of the dual purpose of eco-taxes. They are meant to discourage environmentally damaging behaviour, which implies high levels of taxation in order to reduce consumption. This makes the income flow from such taxes uncertain. The only way to be certain of the income flow is to tax products that are relatively inelastic in demand. The more elastic the demand, the more the tax base will diminish as eco-taxes are applied. This will mean that fewer resources will be available to reduce unemployment. This is not the kind of conflict that should be over emphasised, largely because many of the obvious targets for such taxes have an inelastic demand. An example would be petrol and diesel, where taxes might encourage the use of more environmentally fuels.

The adoption of eco-taxes at the EU level is however, likely to be resisted by the Member States, as the setting and collection of taxes is close to the heart of national sovereignty. As a consequence, the EU uses unanimous voting for taxation issues (Article 99 TEC). This means that any Member State can prevent EU policy being adopted, which it believes to be against its national interest. Any EU wide initiative is likely to conflict with national taxes, subsidies and regulations, because taxes have to be set at a relatively high rate in order for them to have an impact. If taxes just add to industrial costs, this could significantly reduce European competitiveness. Where Member States apply taxes, these might interfere with the operation of the Single Market and as such might be challenged by the Commission. Finally, there is a fear that eco-taxes applied within Europe might interfere with world trade rules.

There are two ways in which a double dividend can be provided by the use of eco taxes. The first is to use the revenue to reduce the tax burden elsewhere. A great deal of evidence does suggest that the social cost of employment within many Member states is too high. Eco-taxes could be devoted to reducing these costs, and as a consequence, industry would become more competitive. The second is to earmark the taxes for specific environmental purposes. For example projects which improve the environment and create jobs at the same time. Both of these strategies might increase the political acceptability of the taxes at a national level. Both strategies can be

criticised. Firstly on the grounds of economic efficiency. It may be that the tax burden elsewhere is appropriate. A second criticism is that the use of earmarked taxes for specific schemes can mean that they are either over-funded or under-funded, depending on the revenue raised. A third criticism is that what is taking place is a redistribution of taxes, which could be done in many other ways to promote employment initiatives. There may be gains in employment from specific initiatives, but there would be a loss of jobs due to a fall in consumer demand. The evidence of the effectiveness of this strategy is therefore somewhat mixed. (OECD 1997)

Advocates of eco-taxes within the EU believe that these objections can be removed by the careful design of taxes, and the use of environmental taxes as part of an overall package of policy. Extensive consultation and their gradual implementation could ease their implementation. (EEA 1996:7) None of these tactics is likely to work at the EU level, because of a lack of unanimity, but at the national level there have been some successes. The most important one being the use of fiscal incentives to encourage a switch to unleaded petrol. However, the number of cases where taxes have actually been redistributed for job creation purposes is limited. The OECD cites cases in Denmark and Finland (OECD 1997). Linking eco-taxes to employment initiatives might be a politically convenient device for making such taxes more acceptable. But, there is little evidence that this represent the best strategy to reduce unemployment. In economic policy terms the issues are not seen as being closely linked.

The reasons for the lack of enthusiasm for eco-taxes is of course well understood by the governments of the Member States. The public resents paying any additional environmental premium. When Eurobarometer surveyed EU citizens about environmental issues, they found that 87 percent of those questioned thought it was important to cut pollution by better traffic management. However, when they were asked for their views on cutting pollution by higher taxes on private vehicles and fuel, only 43 percent thought that it was important and 46 percent thought it was unimportant. It is difficult to believe that an additional undertaking to allocate such tax revenues to job creation will significantly alter this position. (CEC 1996b:54)

## **Conclusion**

The problems of persistently high rates of unemployment and the failure to significantly reduce the levels of environmental degradation are undermining the progress of economic integration within the EU. What is the way forward to resolve these two problems? The Commission of the European Community in presenting the 1997 Communication attempted to identify ways in which a positive link could be made between employment creation and environmental protection. This paper has presented a critical review of the effectiveness of this approach. It is not a new idea within the EU. It was articulated in the White Paper on Growth at the beginning of the decade and returned to at various times in the years since. Despite this on-going debate the Commission's views outlined in 1997 appear to be little more than a public relations rationale for the approach, which is being advocated. The main advantage of the Communication is that it does maintain the profile of the issue.

Is this enough? The problems of environmental protection and employment creation are too serious in their implications for the future development of the EU to risk any undermining of attempts to resolve them through advocacy of unrealistic measure.

The evidence is at best sketchy and ambiguous about the effectiveness of linkage of employment creation and environmental protection. The EU would appear to be facing some difficult choices about the type of policy to support to remedy both the problems. It may indeed be more effective not to try to integrate these two objectives to one another in any prescribed manner. Instead the most effective approach may be to concentrate on fulfilling the commitments set out in treaty Articles 6 and 127 and integrate environmental and employment objectives more effectively into other areas of EU policy .

There are two types of employment discussed in this paper which relate to the environment. Firstly the employment which is in companies which are providing the new and developing eco-technologies and secondly the identification of the environment related industry in other sectors of the economy. In either case job creation will only result if the companies which are involved are competitive. It is an undeniable fact that competitive companies are those which will survive and provide employment and employment creation opportunities. It is equally undeniable that the European Union has not been able to match its employment creation to its employment demand during the 1990s.

New development in eco-technology industries must be treated in the same way as any other new technologies and the realities of the market must be recognised. EU estimates suggest that the real growth in EU eco-industries is likely to outstrip growth in the rest of the economy over the next five years (CEC 1997b:81). The EU has a trade surplus in the eco-technologies with the rest of the world which is equal to 760 mecu per annum. The rate of growth of these technologies and their value for job creation is however driven by a number of factors, some of which are external to the EU. Many of the initiatives to support environmental protection adopted by industry have come as a result to the introduction of environmental legislation at both national and supranational levels. The EU has undertaken a review in order to simplify its legislation and introduce more flexibility in to the mechanisms which are adopted. One of the main pressures which have caused changes in the polluting behaviour of industry may therefore change in the future as a result of the introduction of new forms of Directives. The impetus to find and use new technologies developed for the EU market may be lost.

For companies which are the innovators in the area of eco-technology having early entrance to the market for their products is crucial. It is very difficult to establish if this so-called "first mover advantage" will continue in the long term. As Table 10 showed the levels of pollution within the EU are falling. The pressure which may have driven the search for eco-technology developments may be lost. The impact within the EU of employment in eco-technology based industry is limited to a few states, being particularly important for Germany, but unemployment is high in a number of the states of the EU. Producers in other parts of the world are also beginning to develop new products designed to protect the environment. Even in the four poorest states of the EU which are generally considered to be also the least environmentally aware, the import of eco-technology products is less than the export trade in these products. Trade in the eco-technologies within the EU may therefore not be as profitable in the future for those companies which currently are the most dominant. This is not the scenario to create employment.

There is an apparent positive benefit of the linkage between environmental protection measures and employment growth but it is limited. The main beneficiaries of the approach will be those who are already in employment and find the nature of their employment within a company changing, and with it their need for re-skilling and retraining. In addition, about 50% of the unemployed within the EU are within what might be seen as the normal turnover of the labour market. That is they are individuals who would be employable with a minimum of retraining or would easily be reabsorbed into the labour market if new opportunities arrived as they have not been unemployed for a long period of time. The problems of long-term unemployed, young unemployed and new entrants to the labour market still remain.

The Amsterdam Treaty has done little to enable any significant steps to be made to meet the twin challenges of environmental protection and employment creation apart from establishing a legal basis for the linkage between the two issues. There is little evidence to suggest that there has been significant activity on the part of the national governments to link employment creation and protection of the environment in the 1998 National Action Plans for Employment. The Commission is searching to find the evidence to support the new paradigm. It has yet to provide the guidelines which will have practical effect to the approach which has been advocated. Unfortunately this lack of clarity and specific policy direction may lead to inappropriate policy developments. The evidence of the impact of environmental protection measures on employment is ambiguous. At the present time the best conclusion which may be reached is that environmentally positive policies have a neutral impact on job losses. It may be that there will be a slight positive impact on employment creation if the conditions for competitiveness are met. What the European Commission has done in the 1997 Communication is to enable the issues to remain on the agenda, but there are more questions to resolve than answers given so far by the EU's initiatives.

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