

Professional Education and Training for Sustainable Development in Spain

Summary

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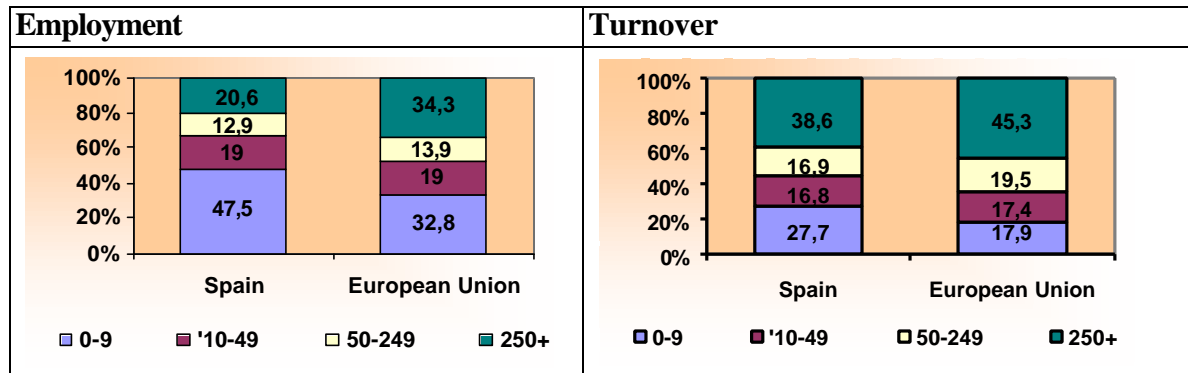


EUROPEAN FOUNDATION
for the Improvement of Living and Working Conditions

Spanish SMES' Environmental Approach

Spain can be defined as an SME dominated country since, in comparison to EU standards, Spanish SMEs represent a larger share in terms of total employment and turnover. Moreover, Spain is specially characterised by the high importance of its micro-enterprise population, also both in terms of employment and turnover.

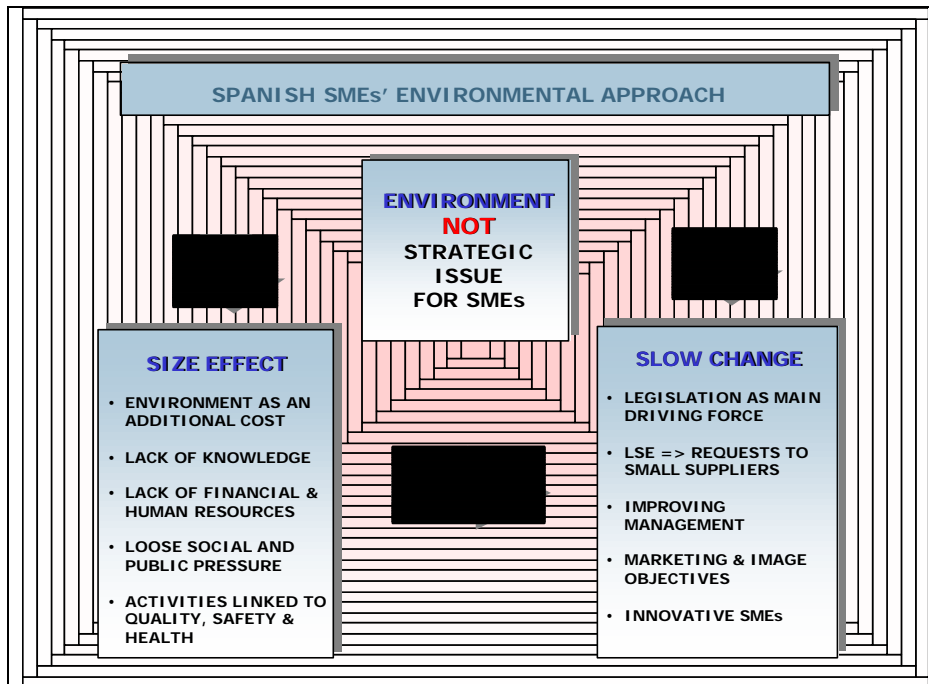
Graph 1: Comparison of key data between Spain and the EU- Employment and turnover, 1995



Source: Eurostat, 1998.

Environment is not yet conceived as a strategic issue within most of the Spanish enterprises' general management. Thus, and generally speaking, environment is regarded in Spain more as an additional cost rather than as an opportunity or a social obligation, where adaptation to existing legislation is regarded as the main driving force for adopting environmental-friendly decisions. In fact, it is possible to argue that, at this moment, there is not a true and widely accepted environmental culture amongst the Spanish enterprises.

However, this perception seems to be gradually changing, especially amongst the larger companies, in the sense that the Spanish large industrial enterprises are gradually shifting towards an environmental consciousness, where environment is increasingly included as a strategic value within the general enterprise management.



By way of contrast, the specific situation within the Spanish SMEs is very different. This report has shown the existence of a close relationship between the enterprises' size (either in terms of employment or turnover) and environmental approach, where the environmental concern is directly related to the enterprise size.

Several reasons are usually given to explain this enterprise size effect, such as the SMEs' lack of knowledge of the existing environmental legislation, the less important social pressure they receive, specially from public authorities, their traditional lack of financial and human capital resources for dealing with the environmental issue and, finally, their lower level of environmental sensitiveness.

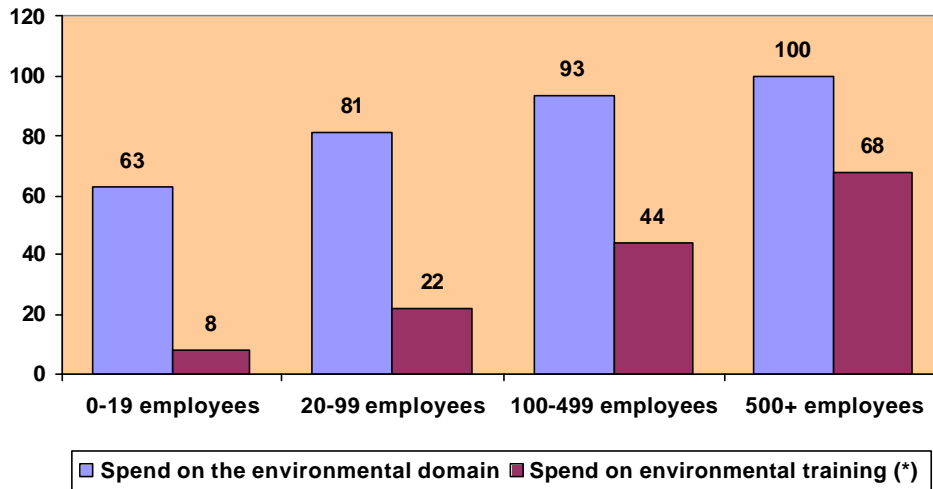
Despite this general negative attitude, it is also possible to identify a slow change from negative to neutral attitudes amongst the Spanish SMEs. Thus, and on the one hand, SMEs are becoming acquainted of some advantages linked to improvements in management or to long-term cost reductions. On the other hand, and from the late nineties, large enterprises are posing increasing environmental requirements on their small suppliers, where this driving force is expected to become much more important in the near future. Finally, some innovative SMEs have identified an environmental-friendly attitude (basically through the availability of environmental certifications such as ISO 14000) with an important business and marketing opportunity through a better enterprise image.

Environmental training in the Spanish SMEs

Training is currently viewed as a key factor within the industrial environmental domain for several reasons. First, training is the natural access way to knowledge. Second, the implementation of environmental management systems and the adoption of environmental best practices are increasingly requiring new skills and abilities from the personnel that have to be acquired through training. Third, the environmental training can improve the employees' motivation and collaboration with the general enterprise's policy.

There is a clear and direct relationship between enterprise size and involvement in environmental training activities. Moreover, the available evidence provided in this report has shown also the direct relationship between enterprise size and level of environmental training.

Graph 2: *Percentage of Spanish manufacturing enterprises involved in environmental training expenses*



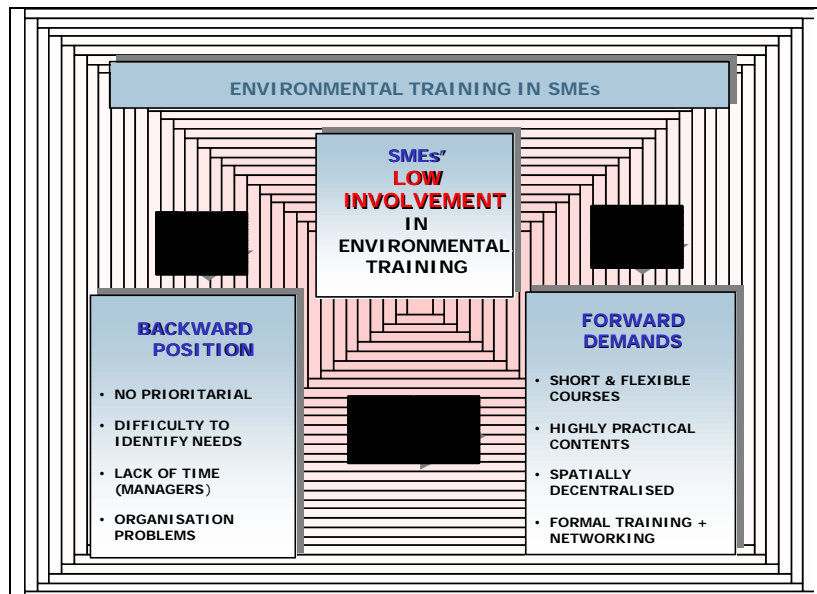
(*) Data only referred to those enterprises that have spent resources in the environmental domain, irrespectively of the field.

Source: Libro Blanco de la Gestión Medioambiental en la Industria Española, 1998.

This backward position of SMEs concerning training is explained by several reasons, such as lack of perceived needs in this domain, or chronic lack of human, material and economic resources, which are employed to other goals regarded as priority by enterprises. Other reasons explaining this backward position include difficulties to foresee and pinpoint SMEs' training needs and demands, the central role that managers and owners play within the SME organisation (so they can not be away from the enterprise too long for a training activity) and, finally, the usual informal nature of the SMEs' training initiatives.

SMEs' environmental training approach is characterised by a number of traits:

1. Time is seen as a more important constraint for training in comparison to cost issues, so SMEs prefer short environmental courses rather than long courses;
2. SMEs do want training with a high practical content that may be rapidly applied by the enterprise to solve its concrete problems and needs;
3. Finally, SMEs appreciate a spatial decentralisation concerning the geographical location of courses, so they do not have to travel long distances to attend a course.



The case studies have shown that the characteristics of the environmental training activities seem to depend very much both on the concrete SMEs' needs and on their different approach to the topic. Thus, some SMEs have followed formal environmental training activities, whereas other environmentally active enterprises rely much more on other training practices such as resorting to networking and exchange of experiences with other managers or entrepreneurs.

Supply of Environmental training in Spain

The research has showed that the existing Spanish supply can be characterised as extensive, in the sense that it includes a wide array of different courses in terms of providers, time length, contents, targets, official/unofficial education, etc. Part of this supply is aimed at improving the environmental knowledge of the general population, whereas an important share is 'supposedly', intended to satisfy the productive system's training needs.

However, and according to several qualitative opinions collected, this wide enterprise-directed supply is scarcely adapted to the enterprises' real training needs, where this is especially true as far as SMEs are concerned. Part 2 has shown that enterprises in general and SMEs in particular have a very pragmatic approach towards their training needs. Thus, enterprises demand for short and practice-oriented courses whose contents may be rapidly translated into the daily working practice. However, most of the existing environmental training supply that it is supposed to be addressed to enterprises does not take into account these conditions.

Table 1 Overview of environmental education and training in Spain

Type of education & training	Examples	Description/assessment
Initial vocational training	<ul style="list-style-type: none"> Upper Degree In Food Industry (130 hours environmental training/2,000 hours total) 	<ul style="list-style-type: none"> Undergoing recent process of reform Lack of environmental contents in non specific degrees Aimed at young people, to become middle technicians within enterprises
	<ul style="list-style-type: none"> Upper Degree In Fishing (130 hours environmental training/2,000 hours total) 	
	<ul style="list-style-type: none"> Upper Degree In Environmental Chemistry (1,400 hours) 	<ul style="list-style-type: none"> Aimed at young people, to become middle technicians within enterprises Few sector specific environmental degrees
	<ul style="list-style-type: none"> Upper Degree In Environmental Health (2,000 hours) 	
	<ul style="list-style-type: none"> Upper Degree In Administration And Organisation Of Natural And Landscape Resources (2,000 hours) 	
	<ul style="list-style-type: none"> Upper Degree In Forest Works And Natural Environment Preservation (2,000 hours) 	
University Education	<ul style="list-style-type: none"> Environmental Sciences Degree (4 academic years) 	<ul style="list-style-type: none"> Limited inclusion of environmental dimension Lack of enterprise oriented environmental contents (even in engineering) Shortages of environmentally educated faculty Wide supply of post-graduate courses, aimed mainly at young fresh university graduates.
	<ul style="list-style-type: none"> Master Degree In Environmental Education (distance training) 	
	<ul style="list-style-type: none"> Postgraduate Course In Environmental Engineering And Management (465 hours) 	
Occupational vocational training	<ul style="list-style-type: none"> Course On Environmental Management (40 hours) 	<ul style="list-style-type: none"> Unemployed oriented training (employability aims) Low skilled occupational profile Short courses
Training by special public bodies	<ul style="list-style-type: none"> National Centre For Environmental Education (CENEAM) Basque Public Company For Environmental Management (IHOBE) 	<ul style="list-style-type: none"> Both national and regional organisations Differences in resources and target audiences amongst organisations Some co-ordination deficiencies
Private institutions training	<ul style="list-style-type: none"> Wide assortment of courses of different nature 	<ul style="list-style-type: none"> Specialised enterprises and independent professionals Consultancy companies: training linked to implementation of EMS FORCEM financed training Continuing vocational training activities aimed at people currently working
	<ul style="list-style-type: none"> Environment-SME Initiative (Fundación Entorno, Empresa Y Medio Ambiente) 	
Training activities by employers associations and trade unions	<ul style="list-style-type: none"> Spanish Chemical Industries Federation (Feique) National Association Of Plastic Industries (Anaip) National Consortium Of Rubber Industries National Association Of Canned Fish Producers (Anfaco) Cluster Association Of Environment Industries Of The Basque Country (Aclima) 	<ul style="list-style-type: none"> Sectorial employers associations Co-operation with environmental authorities Advice and training activities Differences depending on sector FORCEM financed training Continuing vocational training activities aimed at people currently working
	<ul style="list-style-type: none"> Optima Programme: Optimisation Of Procedures And Industrial Techniques For Environmental Improvement 	<ul style="list-style-type: none"> Growing awareness amongst workers and Trade Unions Continuing vocational training activities aimed at people currently working Organisation of courses on different environmental topics: legislation, clean technologies, EMS Collaboration with environmental groups and public authorities FORCEM financed training

Type of education & training	Examples	Description/assessment
Other training activities	<ul style="list-style-type: none"> Course On Environmental Management Systems (24 hours) 	<ul style="list-style-type: none"> Imparted by AENOR, Association for Normalisation and Certification: Training for Certification (EMS, legislation, Env. Audit) Continuing vocational training activities aimed at people currently working, mainly high degree technicians or managers
	<ul style="list-style-type: none"> Postgraduate Course On Environmental Management (56 hours) 	<ul style="list-style-type: none"> Imparted by Chambers of Commerce Continuing vocational training activities aimed at people currently working, mainly high degree technicians or managers
	<ul style="list-style-type: none"> Higher Programme In Environmental Management And Engineering (350 hours) 	<ul style="list-style-type: none"> Imparted by EOI, School of Industrial Organisation Continuing vocational training activities aimed at people currently working, mainly high degree technicians or managers
	<ul style="list-style-type: none"> Programme Of Environmental Managers And Auditors (64 hours) 	
	<ul style="list-style-type: none"> Integrated Course In Quality Audit, Environment And Safety Management Systems 	
	<ul style="list-style-type: none"> On-Line Higher Course In Environmental Management And Engineering 	

It is possible to identify several examples of environmental training supply well suited to the enterprises' needs. Examples include institutions such as AENOR, the 'Escuela de Organización Industrial' (EOI), Chambers of Commerce, several private institutions such as some concrete sector associations or the activities supported by 'Fundación Entorno, Empresa y Medio Ambiente'. Linked to this point, it is important to underline the activities carried out by some of the Spanish environmental consulting enterprises, who are providing training services to enterprises within a general 'package' of different environmental services intended to help enterprises to introduce an environmental management system.

Example of best practice ‘Fundación Entorno, Empresa y Medio Ambiente’

The ‘Fundación Entorno, Empresa y Medio Ambiente’ was established in 1995 as a Spanish non-profit institution (foundation) that aims to contribute to the process of integration of the environmental dimension at the management level of the enterprises. The Foundation patronage includes both the Public Administration (through the Sociedad Estatal de Participaciones Industriales) and several large Spanish private enterprises.

The Foundation is registered at the Spanish Protectorate of Foundations of the Ministry of Culture. The organisation is an active member of the Spanish Confederation of Foundations, The European Foundations Centre and the United Nations Environmental Program (UNEP).

The Foundation’s main objectives include the following ones:

- Provision to enterprises of updated information related to the environment-industry economy interfaces.
- Facilitate the access to capacity building and benchmarking programs, organised by the Foundation, especially to those focused on the implementation of environmental management systems.
- Undertake environmental research projects and programs.
- Serve as a vehicle of communication for those enterprises that want to make their environmental achievements visible to the social sectors.
- Collaborate in all the above mentioned objectives with Latin American and developing countries enterprises.

Within the training domain, the Foundation currently runs several training programmes through workshops, ‘in-company’ courses, conferences and seminars for enterprises willing to start the implementation of environmental management systems. Additionally, the Foundation is also engaged in customised training by correspondence.

In this sense, The ‘Fundación Entorno’ is responsible of a very interesting training programme specifically aimed at the Spanish SMEs. This programme, called ‘Iniciativa Entorno-Pyme’, is a support initiative intended to favour the introduction of environmental management systems within the Spanish SMEs¹. This Initiative is free of charge for the SMEs, and it is jointly financed by the Spanish Ministry of Industry and Energy and the European Social Fund. Up to 1998, around 400 Spanish SMEs have taken part in this programme. The only requirement requested to the SMEs to take part in this initiative is to draw up -and sign up- an own environmental commitment.

Description of the ‘Iniciativa Entorno-Pyme’:

Every SME benefited from the ‘Iniciativa Entorno-Pyme’ carries out three successive training processes:

- a) Theoretical training, where the training is carried out at distance and by means of work groups. During this period, the enterprises have access to a consultancy system. This theoretical training is carried out in two different levels:
 - Training at managerial level: For this group, the training contents are based on those environmental aspects that more directly condition the enterprise management, such as environmental legislation, market trends on environment, competitiveness, international trade and environment, civil responsibility, etc.
 - Training at technical level: the contents are directly aimed at the acquisition of those abilities and skills required for the setting up of an environmental management certifiable system, through ISO 14000 and EMAS (regulated by the European regulation 1836/93)
- b) Practical training, in which those enterprises that have satisfactorily completed the theoretical training have access to a practical stage in order to facilitate the practical application of the acquired knowledge. For this purpose, several workshops are carried out, as well as visits to enterprises where this type of environmental management systems are implanted (benchmarking).
- c) Advice for designing the system. Once the theoretical and practical training is completed, the ‘Fundación Entorno’ supports each participating SME with the help of a qualified consultant. This consultant’s role is intended to prepare the necessary documents to implement the environmental management system in the enterprise (environmental policy, procedure manuals, operational control systems, control of environmental registrations, etc).

¹ Within the framework of this Initiative, an SME is an enterprise with less than 250 employees and/or 6,600 million pesetas of annual turnover.

By way of contrast, and as it was previously explained, most of the remaining environmental training supply and education is scarcely adapted to the enterprises' needs. In this sense, it is worth underlining the case of the Spanish University, whose environmental education supply is regarded by most experts as too theoretical and extensive for enterprises.

As far as the official initial vocational training is concerned, it is important to recognise the important effort currently underway for its reform and improvement. However, and from an environmental point of view, there are important training deficits that should be corrected in the near future. Thus, environmental considerations are not included in a large number of curricula linked to several polluting activities. Meanwhile, those specific vocational training degrees that qualify to work in environmental protection and improvement (i.e. the upper degree in environmental chemistry) are too sector specific, with little synergies with other economic sectors. This fact is extremely important since one of the Spanish industry' main needs is related to the availability of a large number of qualified middle technicians that may integrate the environmental perspective within their daily working practices. This is something still to be done in the Spanish case.

The current available resources for the development of continuing vocational training initiatives under the FORCEM² funds are providing interesting environmentally-related training opportunities for enterprises in general and SMEs in particular. Thus, this report has showed several examples of training initiatives developed by employers' associations and trade unions intended to upgrade the existing environmental skills of the workforce.

Example of FORCEM funded training initiatives

- Courses on the Environmental legislation related to the sector, by the Spanish Association of Plastic Manufacturers
- Design of Training Packages in the Quality and Environmental Domain, by SEFES-Catalan Employers' Association
- Interactive Environmental Training tool (CD-ROM), by the Spanish Federation of Car Retailers
- Study to Detect Training Needs to Introduce and Environmental Management System, by the Spanish Federation of Metal Employers
- Training Needs derived from the Introduction of Environmental Management Systems, by the Hotel Enterprise Federation of Mallorca
- Training Tool on Environmental Issues within Enterprises, by the Confederation of Comisiones Obreras
- Situation and perspectives on Environmental Management in the Sector. Training needs, by the Iron and Steel Federation of UGT
- Study on Vocational Skills within the Environmental Domain in the Chemical Sector, by FITEQA-CC.OO. Federation of Textile, Leather and Chemical Industries
- Working Days for the Exchange of Experiences in the Environmental Training Domain, by UGT - Madrid
- Multimedia Tools for the Self-Diagnosing in the Environmental Domain, by UGT

² FORCEM stands for Spanish Foundation for Continuing Vocational Training.

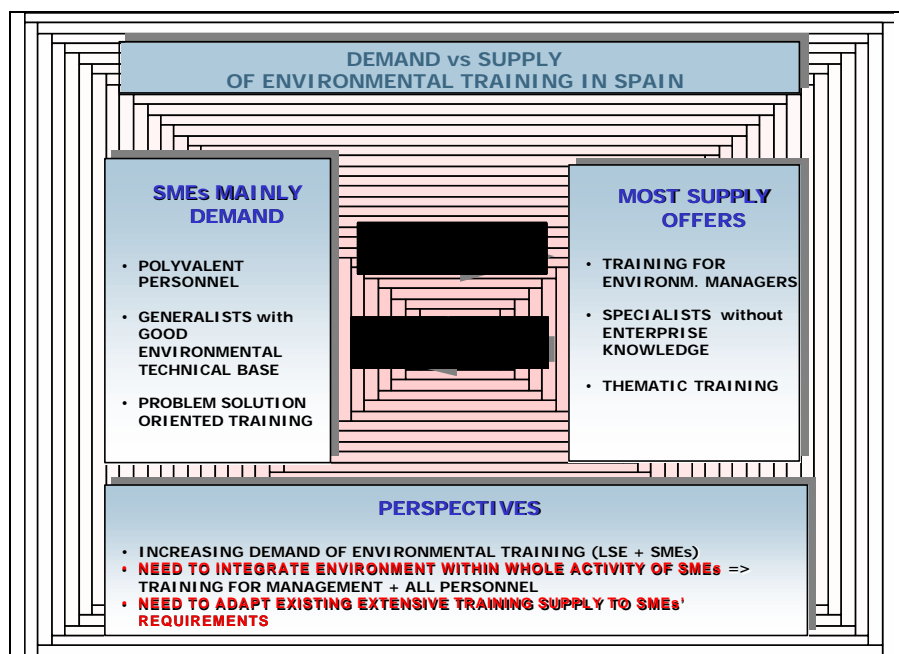
Final Conclusions and recommendations

Even those Spanish enterprises (and specially SMEs) active in the environmental domain show an important resistance and opposition to hire external people for dealing with this issue. Thus, the case studies and the experts' opinions have shown that in most cases, the environmental tasks are assumed by in-house personnel engaged in the quality/safety & health issues. Having in mind this fact, two interesting conclusions can be obtained: on the one hand, environment is a moderate new employment generating source, at least amongst industrial SMEs³; on the other hand, continuing training becomes a key tool for facilitating the acquisition of relevant skills and abilities non available in-house⁴.

Linked to the previous point, SMEs in particular do want (and need) hire individuals who are able to assume different roles and tasks within the organisations. However, most of the existing supply is aimed at training for becoming environmental managers. This is a concrete need in time (once the environmental management system has been introduced by the enterprise this need does no longer exist). Therefore, SMEs are not interested in hiring 'specialists' but rather 'generalists' with a good environmental technical base but who are able to deal with a wide array of tasks and duties within the enterprise.

Generally speaking, it is possible to identify an important lack of well-prepared trainers on environmental issues with hands-on experience within enterprises or sectors. In this sense, these professionals are currently very demanded by the training suppliers.

There is an important need of bringing nearer (in a geographical sense) the environmental training supply to the enterprises. In fact, the current Spanish administrative division and the important role played by the regional governments has facilitated this, although in some backward regions there is still a large room for improvement.



³ This kind of professionals are more likely to be hired within environmental services providers, such as consulting enterprises, cleaning services, etc.

⁴ In this sense, the FORCEM funds are expected to play an increasingly key role in this field.

Looking at the future, it is possible to forecast an important and increasing demand by the Spanish enterprises for training in the environmental domain, specially as far as advanced environmental management systems are concerned. The increasing demands coming both from the Public Administration (more restrictive legislation and attitudes) and from main clients (increasingly demanding environmental certificates) are the main pushing factors in this domain. In this sense, the introduction in Spain of the Directive 96/61 related to the prevention and integrated control of pollution (better known as the IPPC Directive) is expected to even increase this demand.

Finally, and looking also at the near future, it is possible to identify an important need to integrate the environmental domain into the whole management of the enterprise, so the environmental issue is not seen only as a technical problem (being the responsibility only of technicians) but also a general task of the enterprise (both for managers and for shop-floor employees). Obviously, this need should result in training requirements.