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Serie
Competitividad

Environmental Management Systems

and Competitiveness of Basque Firms

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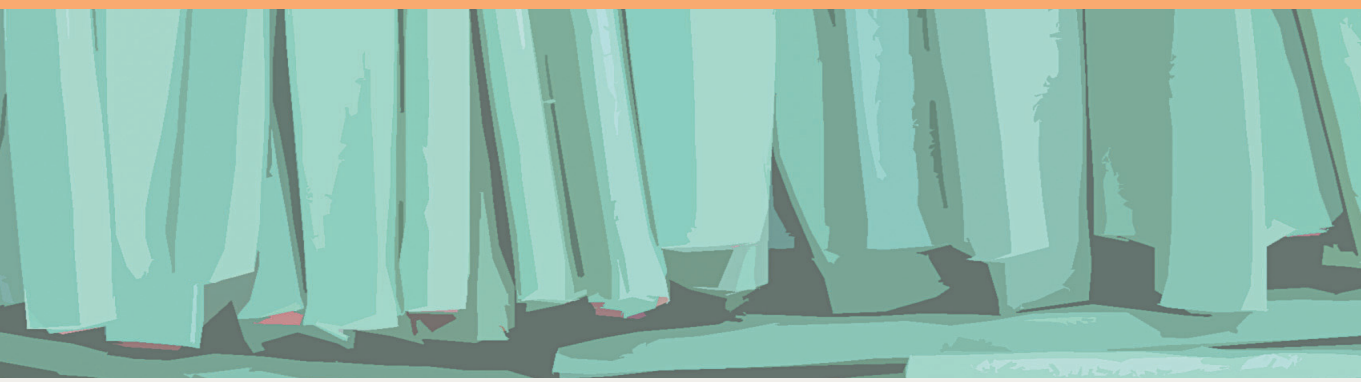

Executive summary

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Environmental Management Systems and Competitiveness of Basque Firms

Executive summary

1. **Introduction**

Concern regarding environmental problems would appear to be taking deep root in the different spheres of society. Diverse initiatives in economic and business activity have been developed in recent decades in this sense; a great number of them have been associated with the term *environmental management* – a concept with which environmental practices tend to be alluded to, ranging from improvements in management and the control of manufacturing processes, to the management of residues, the environmental control of end products, and the ecodesign or implementation of Environmental Management Systems (EMS).

The implementation and certification of EMS tend to be based on both national and international models of reference. The most common on an international level are the ISO 14001 standard and European EMAS regulations. In the Autonomous Region of the Basque Country (CAPV), the implementation and certification of these models of reference have had a major influence both on business organizations on an industrial level and on services, and on organizations of other types (for instance, in public and private organizations from the health and education sector). However, no detailed descriptive studies have yet been carried out on the introduction of such standards, or on their real effects on those organizations that implement and certify them.

The aim of this report is to conduct a descriptive analysis into the incidence of EMS implementation in companies in the CAPV by studying what has been the motivation behind doing so, the obstacles faced and the results of such implementation. The analysis is complemented by a study into the effect of such implementation on the competitive capacity of Basque companies. The main results obtained from a series of studies in this field have been gathered for such purpose. On the one hand, the results of a survey completed by 214 companies in the CAPV in possession of ISO 14001 certificates have been gathered, together with the quantitative results of an economic-financial information database of companies set up by the Basque Institute of Competitiviness (IVC) and, lastly, the results of a series of interviews and visits carried out with the main agents involved in the EMS dissemination process in the CAPV are included.

The report attempts to gather together a series of evidence and conclusions of interest for the set of agents interested in an improvement of environmental policies and in an improvement in the competitive capacity of companies from the CAPV, in particular for those public decision-makers related to the implementation of industrial policy measures aimed at increasing productivity and competitiveness among companies. The main conclusions and recommendations drawn from the study that has been carried out are summarized in this document.

2. **Summary of conclusions drawn from the report**

Dissemination of the ISO 14001certificate in the CAPV

ISO 14001 certification has enjoyed a major presence in the CAPV, although the growth rate in terms of the number of certified companies has dropped over the last few years, evidencing a clear symptom of maturity and saturation on the market.

Table 1: Comparative international dissemination of ISO 14001 certification in the CAPV

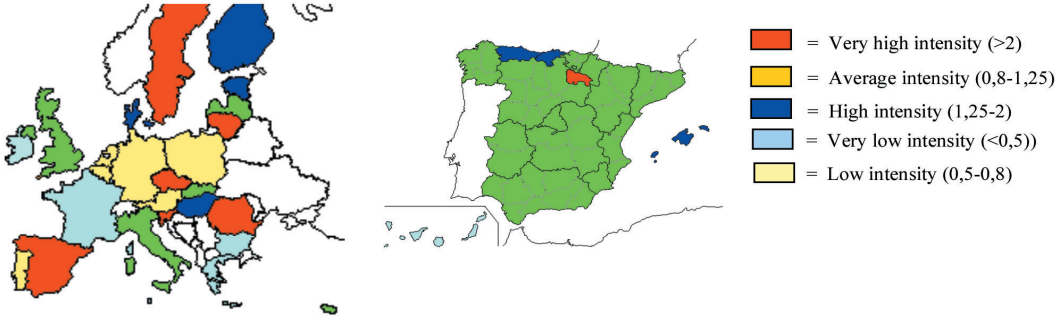
	1999			*2001*			*2005*		
	No. Cert.	*% Cert.*	*IC GDP*	No. Cert.	*% Cert.*	*IC GDP*	No. Cert.	*% Cert.*	*IC GDP*
USA	636	4.51%	0.16	1,645	4.51%	0.16	5,061	4.55%	0.16
Japan	3,015	21.37%	4.27	8,123	22.28%	4.45	23,466	21.11%	4.22
EU-27	6,460	45.80%	1.52	16,571	45.44%	1.51	44,262	39.82%	1.33
Spain	573	4.06%	1.61	2,064	5.66%	2.25	8,620	7.75%	3.08
CAPV	75	0.53%	3.43	268	0.73%	4,74	855	0.77%	4.96

Source: compiled by the authors from ISO reports, Ihobe Register and data obtained from the World Bank, Eurostat and Eustat. IC GDP: Intensity of certification calculated as a ratio between the percentage of participation in the number of global certificates issued and the percentage of participation in the world GDP for 2005 measured in dollars.

Thus, the growth rate in terms of ISO 14001 certificates in the CAPV over the last few years has been lower than the national growth rate, although it has been similar to the average experienced by the EU-27. On a national level, the CAPV was ranked in seventh position in 2005 among the autonomous regions in terms of its ISO 14001 certifying intensity. This has resulted in a drop in the ranking of the CAPV, given that it was ranked second behind the Autonomous Region of La Rioja in 2001.

It should be stressed that in the CAPV, the distribution of ISO 14001 certificates according to Historical Territories is very homogenous in terms of the economic dimension of each of them.

Figure 1: Intensity of ISO 14001 certification in Spain and in the UE-27 (2005)



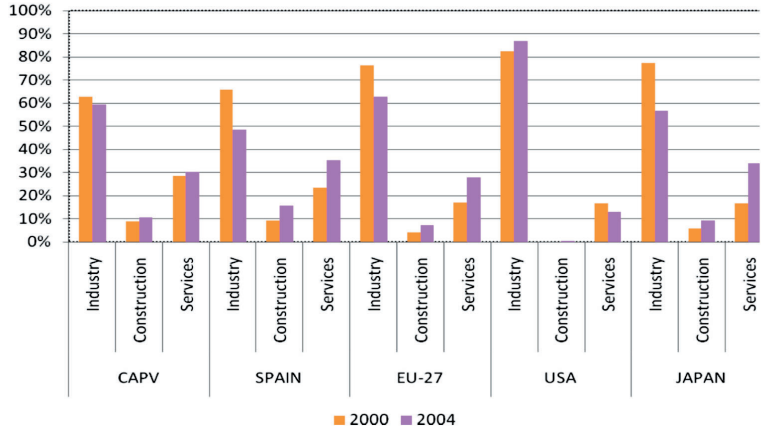
Source: compiled by the authors from data obtained from ISO and Eurostat reports. Note: calculations made using the GDP for 2004 measured in PPS terms.

Sectoral distribution of ISO 14001 certification in the CAPV

ISO 14001 certification is not distributed homogenously on a sectoral level, but rather there are clear sectoral differences. There has always been a clear superiority in the CAPV in terms of the weight of certificates issued in industry over those certificates issued in the services sector. Specifically, the mean weight of industrial certificates was 58 per cent from 1999 to 2004, whereas the weight of certificates issued in the services sector was 33 per cent.

The percentage of participation in ISO 14001 certificates in the CAPV issued in the industrial sector is similar to that of the average for the EU-27, but much higher than the Spanish national average, which has experienced major growth in certificates issued in the industrial and construction sectors. There has also been a similar percentage of participation in the services sector in the CAPV to that of the average for the EU-27.

Graph 1: Comparative evolution of the sectoral distribution of ISO 14001certificates



Source: compiled by the authors from the classification made by the register of companies certified in accordance with ISO 14001, the Ihobe Register for the CAPV, and the complete reports of world statistics for ISO 9001 and ISO 14001 published by ISO.

Features of companies in the CAPV that implement and certify ISO 14001

ISO 14001 certification above all affects larger companies although, conversely, it would appear that this effect has slightly decreased over the last few years, as has also been the case with the ISO 9001, as both the average size and the median value of the number of employees who have obtained an ISO 14001 certificate has been experiencing a downward trend. Thus, it may be noted that in 2005 the average size of companies decreased by a mean value of 57 employees and a median value of 30 employees – the lowest levels hitherto reached using these indicators.

On the other hand, it has also been noted that those companies in the CAPV that have opened up more to overseas markets in terms of percentage turnover set aside for exports, also tend towards ISO 14001 certification more than those companies which have not done so.

Incidence of adoption of EMAS regulations in the CAPV

Adoption of EMAS regulations is not very widespread in the CAPV in quantitative terms, as by June 2006 only 38 business plants had started to adopt European regulations. The maximum number of plants that decided to adopt these regulations - 8 - was reached in 1999 - an annual

growth rate that was maintained in subsequent years until 2003, when the rate started to drop and continues to do so.

The CAPV, with a 4% participation rate, was ranked seventh in terms of all those plants that decided to adopt EMAS regulations on a national level, according to data from July 2007. However, it should be taken into account that Spain is ranked second among the EU-27 both in absolute terms and in terms of intensity of the number of plants adopting the regulations according to the size of the country's economy. In fact, with its 38 business plants, the CAPV would be ranked fifth among the EU-27 for 2007 in this case.

As regards the size of organizations in the CAPV that have adopted the regulations, it should be pointed out that their average size was 349 employees, according to data from June 2006, whereas the median was 136 employees. These are higher figures than the ones calculated for the total number of organizations in the EU-27 which have decided to adopt the regulations, with a mean and median of 389 and 55 employees respectively, and still far greater than those calculated for the total number of Spanish organizations which have done so, with a mean and median of 158 and 40 employees respectively (data from June 2007).

As regards the distribution of sectors which have decided to adopt EMAS regulations, it should be pointed out that the figures are more similar to that of the mean distribution among the EU-27, as is the case with the Autonomous Region of Catalonia, than that of total sectoral distribution in Spain: 60% in the CAPV refer to industrial organizations (55.9% in the EU-27), whereas organizations in the services sector account for a 40% participation (identical to that of the EU-27).

Incidence of Ekoscan certification in the CAPV

According to the latest data provided by Ihobe (as at the beginning of September 2007), there are now 131 companies in the CAPV in possession of a current Ekoscan certificate. Not all the companies that have participated in the Ekoscan programme have ended up becoming certified, but rather - conversely – the ratio of companies that have taken part in the programme and have ended up obtaining the certificate is low.

The average size of companies certified in accordance with Ekoscan is 125 employees, a significantly lower average size than that of organizations in the CAPV certified in accordance with the international ISO 14001 standard and which have adopted EMAS regulations.

As regards sectoral distribution of certificates awarded, special mention should be made of the weight of companies from the services sector (around 80% of those certified), and the limited impact of certification on the industrial sector, despite positive discriminatory aid having been established for companies from the last-mentioned sector.

Motivation of companies from the CAPV to implement and certify an EMS in accordance with ISO 14001

From the field work carried out, the major weight given by companies from the CAPV should be stressed both in terms of motivation of an external nature and motivation of an internal nature when referring to the reasons why they have decided to certify an EMS in accordance with ISO 14001.

Motivation in terms of an improvement in the efficiency of the company's environmental impact, an improvement in the external image of companies and compliance with customer demands were some of the types of motivation most often taken into consideration, followed by other forms of motivation such as compliance with the legislation in force.

In the course of the study, some significant differences in motivation were contrasted with regard to the implementation of the ISO 14001 standard according to the size of the companies consulted, given that the larger companies placed greater value on the internal motivation factor rela-

ted to the minimizing of environmental problems, while at the same time the same companies placed less importance on the improvement factor of competitive advantage.

In the opinion of certified companies, the company's interest groups or internal and external stakeholders who applied the most pressure in order to demand compliance with environmental legislation are the following: among the internal pressure groups, the pressure exerted by the company department in charge of environmental aspects or by the company management itself, and as regards the external pressure groups, public administration and customers, whereas the pressure exerted by insurance companies, by competitors or other external interest groups placed less emphasis on this.

Main obstacles facing companies from the CAPV in implementing and certifying ISO 14001

For those companies consulted, the main obstacle they face when implementing the ISO 14001 standard is related to legal requirements, regulations and other related factors.

Both consultancy firms and those auditors consulted stressed to us the fact that the problem with certification regarding the environment lies in the fact that, broadly speaking, companies do not comply with environmental legislation. In this sense, it can be stated that when implementing an EMS, the greatest investment is set aside for complying with the legislation in force.

Another of the issues that is most highlighted is related to the difficulty on the part of the company in knowing what environmental legislation is applicable to them. Many agents were consulted who stressed to us the situation facing many companies from the CAPV, above all smaller companies, who experience major shortcomings as regards knowledge of environmental legislation and of certain basic procedures to be taken into consideration when embarking on their activity.

The major investment required by companies to implement the ISO 14001 standard is also a related obstacle which carries great weight, together with the obstacle related to the lack of technical know-how in the company. Small and medium-sized enterprises are those which, broadly speaking, place greater importance on aspects related to a lack of technical know-how and on ignorance about the laws and regulations in force, which constitute obstacles to implementing the environmental standard.

External support received by companies from the CAPV when implementing ISO 14001

Most of the companies from the CAPV that have been consulted pointed out they have used some type of external consultancy service by way of support. Companies that had received such an external support service were, generally speaking, satisfied with the service received.

As far as positive aspects of support received, the companies consulted above all placed importance on the technical support provided and the previous experience of consultants.

As for negative aspects or aspects that could be improved, attention was drawn above all to the lack of experience and training on the part of consultants and the lack of adaptation of the consultancy service to the company's specific circumstances – in other words, consultancy firms were criticized for offering too standardized a service. Another aspect also referred to by a great number of critics was related to the cost of contracting the service, which they considered expensive, and also problems regarding delays and excessively long deadlines.

Auditing service received by those companies certified in accordance with ISO 14001

According to the responses received, it can be stated that the companies consulted feel satisfied with the service provided by the relevant certifying bodies.

In terms of the most positive aspects of this service, the companies consulted referred to relatively heterogeneous factors such as the experience of those people providing the service, the objec-

tivity and rigour, and their capacity to provide solutions for dealing with any deviations detected or for carrying out audits from the point of view of improvement and advice on compliance with the procedures and legislation in force.

The negative aspects that were most highlighted were related to the cost and duration of the certification process, its excessive rigidity, the excessive meticulousness involved in the work, the tendency towards red tape, the diversity of criteria among auditors, the need to provide greater added value in terms of audits and the lack of specific knowledge about the sector in which the companies operate.

Main benefits or results obtained by companies from the CAPV in implementing and certifying ISO 14001

The benefits deriving from the implementation and certification of ISO 14001 most referred to by companies and those on which they placed the greatest importance were related to such diverse factors as compliance with environmental legislation and regulations, improvement in environmental efficiency and in the management of processes and residues, and the improvement gained in the external image of the company.

Conversely, once again special attention should be drawn to the little weight given by companies from the CAPV interviewed to the factor involving improvement in the competitive capacity of the company.

Broadly speaking, the companies consulted are satisfied with the implementation of the standard.

Support from public administration by means of grants to promote the implementation of EMS in accordance with ISO 14001 and EMAS

In the field work carried out, the agents consulted highlighted the importance of institutional support in introducing these standards, for instance via the awarding of grants. This prominent role of public funding is also referred to in international literature on the implementation of EMS.

In the CAPV, the Department of Town and Country Planning and the Environment of the Basque Government has informed us of a specific programme of financial aid aimed at promoting the implementation and certification of EMS based on ISO 14001 and EMAS, of the type also existing in most other autonomous regions in Spain. However, it should be taken into account that the aforementioned department has also issued a decree governing general funding for environmental improvement, within which grants have been applied for and awarded for such purpose.

Furthermore, it should also be taken into account that, as is the case with grants awarded for subsidizing the implementation of Quality Control Systems, there have also been and currently continue to be some sectoral grants in the CAPV offered by other departments from the autonomous administration which are set aside for the implementation of EMS in Basque companies (for instance, those awarded by the Department of Transport and Public Works of the Basque Government or those awarded by the Department of Housing and Social Affairs).

As regards the work carried out by the Provincial Councils of the three Historical Territories, it should be pointed out that the Provincial Council of Bizkaia had granted financial aid to companies for the implementation of such systems, whereas the Provincial Councils of Alava and Gipuzkoa had not done so. This matter of public aid for the implementation of EMS is one that has been subject to major criticism, as several of the agents consulted had requested homogenization of the aid offered by the different provincial councils in this area of funding, as for instance also occurs with other areas of funding (such as in the case of quality management and innovation management).

Impact of the implementation and certification of EMS on the competitive capacity of companies

The evidence gathered throughout the qualitative field work carried out is not conclusive in this respect. There are two clearly opposed stances or standpoints.

From a pessimistic or negative standpoint, several agents consulted stress the fact that it proves more complicated to associate an environmental management standard such as the ISO 14001 standard with an improvement in a company's profitability and competitiveness, than a management tool such as the ISO 9001 standard governing the implementation of a Quality Control System. It is maintained that implementation of the ISO 14001 standard entails added costs and commitments in comparison to the ISO 9001 standard. From this standpoint, there are those who are of the opinion that the costs generated by implementation deriving from compliance with legal requirements may lead to a reduction in the competitive capacity of the company. Conversely, other agents consulted informed us that the implementation of an EMS entails an increase in investment and improvements in many companies – something which in the long term generates competitive advantages owing to the reduction in costs that this investment brings about.

Despite this, from the interviews carried out and the visits made, we can state that the motivation factor – both the initial one and the one guiding the EMS implementation process – proves to be a key element in its impact on competitive capacity. Those companies that have proceeded with implementation under the sole pretension of obtaining the certificate and thus responding to a source of external motivation view it as a mere bureaucratic task and do not incorporate it into the day-to-day running of their business.

In contrast, those companies that have believed in implementation and certification have found that it has helped to improve their operative efficiency and for them to become better organized, in such a way that on many occasions it has given them the chance to reduce costs, improve their work method and obtain other similar improvements. It should be stressed that this last-mentioned situation has been detected both in companies in which the initial motivation was basically internal, but also in companies in which the implementation and certification of EMS had been carried out for external reasons, such as owing to customer demands.

Public administration in the CAPV has played a major role in promoting environmental management and EMS

Generally speaking, an assessment of the work carried out by public administration has been positive, and major importance is placed on the extent to which environmental management has been disseminated in the CAPV. As far as the Basque Government is concerned, special mention should be made of the role played by the Department of Town and Country Planning and the Environment of the Basque Government in promoting environmental management and in the support given to the Basque Municipal Corporation for Environmental Management, Ihobe. Nevertheless, the need should also be stressed for greater backing to be provided to this municipal corporation and its work in terms of greater dissemination of the Ekoscan certificate.

An assessment of the work carried out by the Provincial Councils of the three Historical Territories has also been positive, in particular with regard to the activity carried out by the Provincial Council of Bizkaia.

There are aspects of improvement in promoting the implementation of EMS that the public administration of the CAPV should stress

Nevertheless, contributions were also gathered that highlighted the need to improve the courses of action taken on different administrative levels. Thus, for instance, there is criticism of the response time on the part of some sections of public administration in addition to the response time of

the Department of the Environment of the regional public administration and that of local administrative bodies.

Another criticism lies in the request for an improvement in existing constitutional coordination among different sections of public administration with regard to the promotion of environmental management in companies from the CAPV. This request for improvement in existing coordination also applies to the different departments of the various sections of public administration.

Other contributions highlight the fact that public administration should attempt to raise greater awareness among SMEs towards EMS, although, in our opinion, it is clear that actions have been taken and significant efforts made in this sense.

Furthermore, some companies that had adopted EMS regulations complained of their limited value in terms of recognition by public administration. Specifically, it was mentioned that the expectations leading them to adopt the regulations had not been met. For instance, it was mentioned that there was an expectation that EMAS would help them to gain the recognition that would prevent them from undergoing some inspections and other requirements on the part of public administration – which had not been the case in the opinion of those companies.

The public administrative bodies consulted accept this criticism in an understanding manner and express a desire for improvement – also on occasions with there being a certain disparity in terms of criteria and a fair amount of doubt. For instance, as far as the criticism of the low regard given to adoption of EMAS regulations by the relevant management is concerned, attention is drawn to two issues that could be deemed very important in this respect: firstly, the importance given to this recognition of environmental management by public administrative bodies should not become an end in itself when taking the decision as to its implementation and, secondly, a homogenous auditing process of the different reference points needs to be incorporated into this policy in order for it to become established so as to meet the demands made by all existing certifying and validation bodies.

Another common criterion related to the work carried out by public administration lies in the lack of assessment of funding programmes provided to companies – in this case, for instance, funding set aside for the promotion of environmental management. Environmental Quality Management informs us that there did not used to be an assessment procedure for funding programmes, although such programmes are soon going to be subject of assessment.

Lastly, it should be pointed out that local administrative bodies were asked for a greater capacity for collaboration and, in particular, greater flexibility when issuing certain types of authorization and permits which, at the end of the day, companies considered important for their environmental management-related work.

The companies and agents consulted have a very positive view of the work carried out by the Basque Municipal Corporation for Environmental Management, Ihobe

Special mention should be made of the work carried out by Ihobe in promoting environmental management in the CAPV. Ihobe is seen as a benchmark organization, not only on a national level, but also within the framework of the European Union. Above all, attention is drawn to the wide range and quality of the services it provides such as Legescan, Ihobe-line, its different publications and the training and dissemination courses that it organizes, among others. In this sense, special mention should also be made of the high regard enjoyed by the Ekoscan programme, which has an important effect on the promotion of environmental management in companies from the CAPV.

Among important aspects that could be improved in the work carried out by Ihobe, special mention should be made of its shortcomings in terms of proximity and capacity for communication with companies – this could be improved in the opinion of some of the agents consulted. The latter also criticise its high degree of interventionism and discrimination in the policies it promotes, as well as its limited permeability to the suggestions and contributions it receives. Criticism is also

made of the trend on the part of this body to respond to demands from medium-sized and large enterprises, albeit less so from companies of a smaller size –another common criticism of this type of public body.

Assessment of the work carried out by the consultancy and auditing sector

The agents polled and interviewed rate the promotional work carried out by the consultancy and auditing sector in the field of environmental management positively. Attention is drawn, as is the case with quality management, to the fact that we are dealing with a mature sector with a reasonable level of knowledge and high degree of experience and with a competitive capacity and ability to adapt to market demands, and also with a reasonably good record of putting this into practice.

In terms of weakness, attention should however be drawn to the perhaps excessive atomization of the sector – the breaking into many consultancy firms of freelancers – which has perhaps in turn led to certain heterogeneous behaviour among both individuals and small companies with limited experience and know-how. As far as those aspects that ought to be subject to improvement in the work carried out by consultancy firms is concerned, mention is made of their need to become more involved in the organizations to which they offer consultancy services in an attempt to develop a more sustainable business with greater value added.

Furthermore, it should be pointed out that companies from the consultancy sector are critical of the advisory services provided in the field of environmental management - as is also the case with quality management – by some public or semi-public companies which, due to the public funding they receive, compete under unequal conditions on the market and, as a consequence, establish a price policy and service in terms of quality of service that may prove detrimental to the sector as a whole.

As regards the role of auditors that belong to the different bodies that certify EMS in the CAPV, special mention should be made of the high level of knowledge of legislation and regulations governing the relevant sector on the part of professionals. As a positive aspect, the change in direction towards an auditing model with greater value added should also be pointed out.

Inevitably, aspects were also referred to in which the service provided should be improved, such as regarding the need to improve transparency in the certifying body sector and the need to establish homogeneous certification criteria – aspects in which public bodies such as the National Accreditation Body (ENAC), which is dependent on the Ministry for Industry, play a significant role in terms of responsibility.

3. **Final reflection on the report**

In this extensive report we have attempted to obtain a snapshot of the situation facing companies from the CAPV as far as the implementation and certification of EMS is concerned. This situation is of course a heterogeneous one, in which there are companies in which the EMS implementation process has been carried out within a clear structured process of improvement in terms of their internal efficiency, compliance with the environmental legislation and regulations in force and, hence, within a process that has also had a repercussion on an improvement in their environmental impact.

In contrast, in other companies, the EMS implementation process has produced far less significant results, either due to the clearly opportunistic standpoint with which EMS implementation and certification has been approached – a standpoint in which certification has become an end unto itself, or because implementation has been forthcoming in sectors of economic activity such as the field of health or education – in which these EMS in principle do not have the same repercussions they may have in other sectors with a greater environmental impact, such as in industrial sectors like the chemical sector.

This situation regarding companies from the CAPV would appear not to differ significantly from the situation facing companies elsewhere, as has been made clear in the references made in this report to other empirical work that has been previously carried out.

The implementation and certification of an EMS in accordance with ISO 14001 – the most used EMS standard – has given the chance for many organizations from the CAPV to advance in terms of compliance with the environmental legislation and regulations in force. It would appear patently obvious that responsibility for the main prescriptive and sanctioning work carried out in compliance with the legislation and regulations in force falls on public administration, although management system standards with certification procedures via a *third party* – such as the ISO 14001 standard, in which a commitment to compliance with the legislation in force is sought, or standards of reference such as EMAS, in which compliance with such legislation is demanded –constitute tools that public administration turn to for such purpose. Indeed, it is becoming increasingly apparent that public administration *does* in practice have clear limitations in terms of resources when trying to enforce environmental legislation and regulations.

However, it is in this scheme of things where problems related to auditing or verification of EMS are of particular significance, given that it is essential for them to function suitably by transmitting confidence that is central to standardization and certification schemes, using homogeneous criteria for developing courses of action that do not pervert the system. Rigorous and demanding courses of action on the part of the different competent levels of public administration are therefore fundamental in this field.

Looking towards the future, it would seem that environmental management and the implementation of EMS will continue to be promoted in the CAPV via the different levels of public administration. In any event, we understand that, with a view to the future, the environmental management and EMS implementation initiatives that are being pursued in the CAPV should perhaps be based on a more ambitious and proactive attitude among companies and the other agents involved. We understand that from a strategic standpoint, environmental management may also become established as a more important tool for many companies – a tool that could play a greater role in making companies and the products they commercialize stand out above the rest – for instance by means of ecodesign – an initiative that regional administrative bodies are greatly promoting via Ihobe. Reference should also be made along similar lines to the implementation of EMS itself, which should not be viewed as mere tools destined to improve compliance with the legislation and regulations in force, to improve the external image or – at most – to improve the internal efficiency of the company.

This more strategic or proactive standpoint regarding environmental management should be associated with the *paradigm of innovation* which would seem to be penetrating the CAPV so forcefully. The new 2010 Science, Technology and Innovation Plan highlights this idea of conceiving the environment as a chance to reinforce innovation with the purpose of improving competitiveness in companies from the CAPV; in this sense, reference is made to the concept of «eco-innovation» (an ecology-innovation binomial) – «a central element in making the environment a vector of innovation that may be applied both to products and to services». «The driving force effect that compliance with new regulations can exert over innovation» is also stressed in a clear allusion to the Porterian standpoint. It would seem evident that the paradigm of innovation should not stand in the way of environmental legislation owing to its potentiality for improvement in the operative efficiency of companies and the potentiality for improvement in terms of their environmental impact, but also owing to its potentiality for achieving other greater strategic objectives.

As Michael Porter points out, sometimes there is clear confusion between the concepts of operative efficiency and strategy. Operative efficiency is, according to Porter, a major source of profitability differences among competitors, directly affecting their relative position in terms of costs and to the extent to which they stand out above the rest; however, according to this author, operative efficiency is necessary but insufficient, and should not take up the place occupied by strategy.

Well, we understand in this sense that environmental management and EMS may be necessary in order to achieve such operative efficiency, although they may also help to define a suitable competitive strategy.

In many companies from the CAPV, there has been no genuine proactive attitude in the implementation of EMS and, as a result of it, only a part of the benefits of the total that could be gained have actually been obtained in many cases. The adoption by companies of a proactive strategic attitude towards the environmental factor is related to a long-term vision regarding the benefits that such a strategy could bring – benefits that should not only be assessed in terms of opportunity for improvement with regard to economic-financial results, but also in terms of improvement in the capacity for survival on the market in order to suitably face the growing pressures and threats that have been referred to in previous chapters.

In any event, we should also take into account all the potential advantages we have been referring to that may at times be translated into advantages that are directly linked to economic results, although in other cases will be translated into another type of indirect results that may be achieved via the development of very relevant capacities for the future success of the company – such as the capacity for continuous innovation, the capacity for learning, or the capacity for establishing relations with certain interest groups. As a result of the aforementioned, we consider that EMS implementation is a major element that needs to be incorporated into the strategic planning process of companies.

Looking towards the future, the challenge facing all the agents involved, both private and public, is to try and redirect the situation in such a way as to obtain greater benefits from the *win-win* perspective - in other words, from a perspective that highlights the possibility of improving business competitiveness and the impact of companies on the environment at the same time.

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