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**TRADE IMPLICATIONS OF INTERNATIONAL STANDARDS
FOR QUALITY AND
ENVIRONMENTAL MANAGEMENT SYSTEMS
(ISO 9000/ISO 14000 Series)**

Response to questionnaire

Draft 13 October 1995

**Prepared by
Industrial Sectors and Environment Division
and
Human Resource, Enterprise and Private Sector Development Division**

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1. General

1.1 Description of the questionnaire

The United Nations Industrial Development Organisation has carried out a survey of developing countries and emerging economies in Latin America and the Caribbean, Africa, Asia and eastern Europe on the subject of ISO 9000 and ISO 14000 series of standards. The purpose of the questionnaire was to identify the specific problems of developing countries and emerging or transitional economies caused by the impact of the above-mentioned standards on their trade relations. Special attention was paid to the situation of small and medium enterprise (SMEs).

The questionnaire comprised three sections: one about the respondent's organization, one about the experience with the ISO 9000 standards for quality management systems and one about the proposed ISO 14000 series of standards. At the time the survey was done, June 1995, the draft version of ISO 14000 had not been released yet.

The contents of the questionnaire on trade implications of international standards for quality and environmental management systems (ISO 9000/ISO 14000 series) are outlined below.

1. About the respondent's organization
2. The ISO 9000 series of management systems standards for manufacturing and services
 - General awareness
 - Perceived importance of ISO 9000 by business
 - Popular perceptions of ISO 9000
 - Implementing the ISO 9000 series
 - National infrastructure for conformity assessment
 - QSAR
 - ISO 9000 series and international trade
3. The proposed ISO 14000 series
 - Significance development of environmental issues
 - Awareness perception of the ISO 14000 series
 - Cost of compliance
 - Infrastructure
 - International trade
 - Environmental labelling

The questionnaire itself is reproduced in annex 1.

1.2 Methodology of distribution

Approximately 200 questionnaires were distributed by mail. Government departments, accreditation bodies, certification bodies, standards bodies and industry associations were encouraged to express their views and suggestions freely and to return the questionnaire, even if their awareness or knowledge was not sufficient to answer all the questions.

1.3 Response rate

The respondents are listed in annex 2. Due to the very low response rate, the cut-off date for replies had to be extended from 16 June 1995 to 14 August 1995. Finally, the response rate was 69 per cent of the countries, or 33 per cent of dispatched questionnaires.

2. Description of respondents

2.1 Geographic distribution

UNIDO received questionnaires from three countries out of twelve in eastern Europe, namely Turkey, Romania and the Russian Federation. From Africa, ten countries out of fourteen responded to the questionnaire; authorities from eleven out of fourteen Asian countries responded. In Latin America and the Caribbean (LAC), the response rate was seven out of ten countries.

In Asia the number of responses per country was highest. Up to six different bodies (India, Pakistan) returned the questionnaire in each country, a lack of infrastructure in some of the African countries made it difficult to identify appropriate bodies. Thus, bodies from Asian countries dominate, making up 43 per cent of total respondents, followed by those from Latin American and Caribbean countries with 25 per cent, Africa with 24 per cent, and eastern Europe with 11 per cent (figure 1).

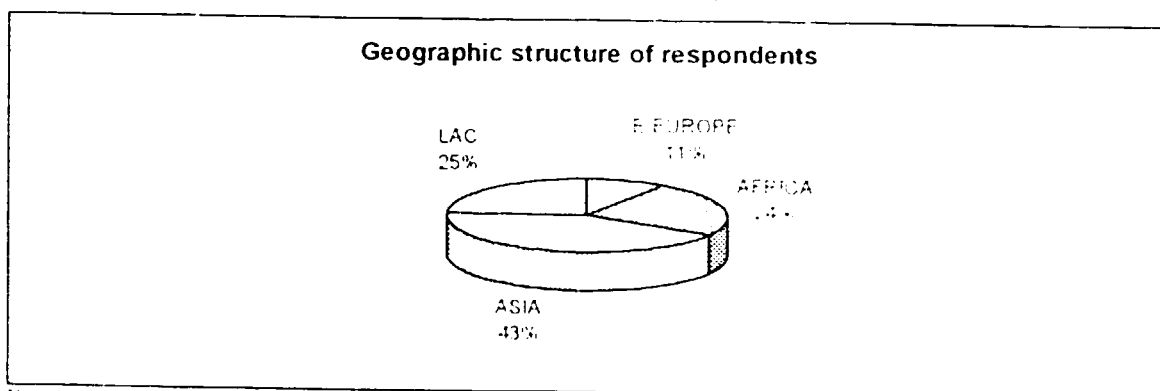


Figure 1. Geographic distribution of respondents

2.2 Organizational structure

National standards bodies dominated among the respondents, accounting for 34 per cent (figure 2). They were easy to identify as appropriate respondents, and they naturally had great interest and competence in the subject matter. They were, moreover, willing to spare personnel to respond and did not have difficulties in answering the questions. Various government departments, ministries of industry, ministries of environment and departments for quality promotion or export promotion, to name just a few, accounted for 23 per cent of the respondents. The third largest group was industry associations, with 21 per cent. Certification bodies (national and international ones with affiliates in the particular country) and accreditation bodies made up 11 per cent and 6 per cent, respectively. Finally, 5 per cent of the respondents were representatives of large companies, either large national companies or local plants of multinational companies.

In the analysis of survey results, industry associations and companies are jointly called "industry representatives" (they are the ones who have to comply with the standards under consideration), and their point of view is contrasted with that of national standards bodies, government departments, accreditation and certification bodies, which are concerned with the administration of the standards.

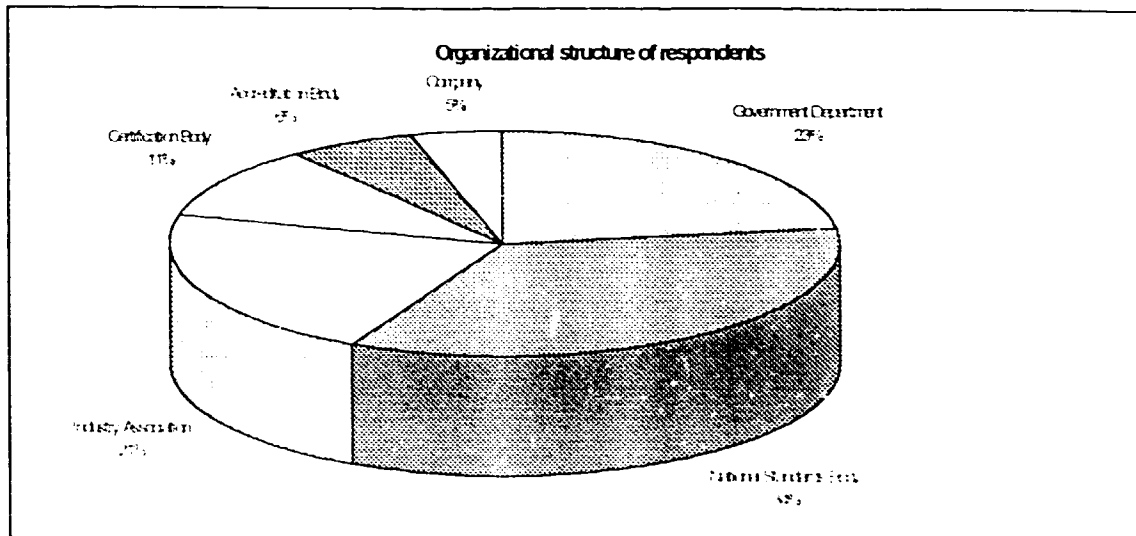


Figure 2 Organizational structure

3. Experience with ISO 9000

3.1 Awareness of ISO 9000

Awareness of ISO 9000 by the respondents was highest in Brazil, Nigeria and Thailand, the result from Nigeria has to be considered with caution, however, because there is only one response. Awareness was also relatively high in China, Sri Lanka, Taiwan Province of China and Turkey. At the other end of the scale is Ghana, where awareness was apparently extremely low. Similarly, business hardly knew about ISO 9000 in the United Republic of Tanzania, Zambia, Antigua, Bolivia, Pakistan and Romania. On an average, awareness was highest in Latin American countries and lowest in African countries (figure 3)

Unsurprisingly, in all countries, awareness was lowest among SMEs and highest among multinational companies, but also quite high among large national enterprises

Awareness of ISO 9000

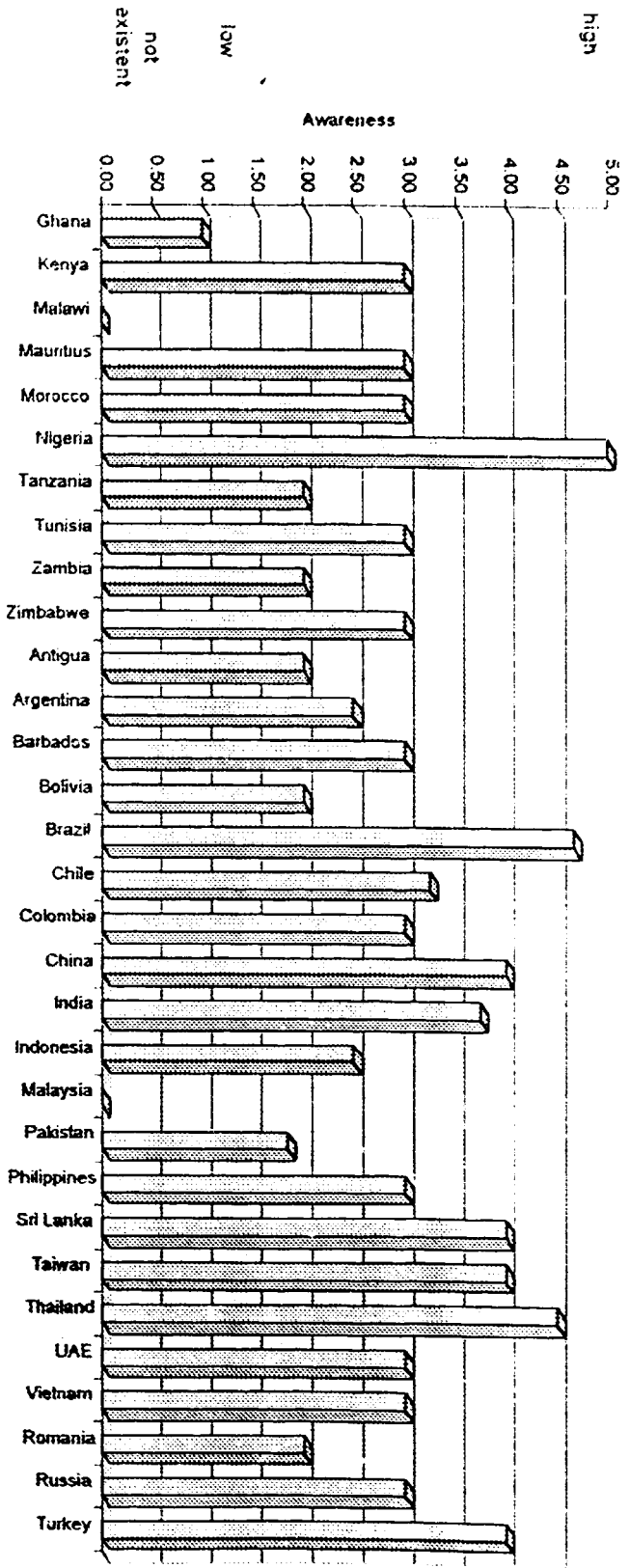


Figure 3 Awareness of ISO 9000

3.2 Importance of ISO 9000

ISO 9000 was perceived to be of most importance for exporters, particularly in Latin America and Asia, less in Africa. It was of hardly any importance for SMEs and importers and of little relevance for producers for the domestic market. Even though importance for all sectors was growing, it was especially the domestic producers for whom ISO 9000 was expected to gain in importance, although whether it would be short-term or long-term depended on the time horizons of the respondent. Importance also depended on the trading partners of the exporter. Export markets like the European Union, the United States, Switzerland and Canada were considered as demanding ISO 9000 registration.

3.3 Implementation of ISO 9000

3.3.1 Number of ISO 9000 registered companies

The number of ISO 9000 registrations per country was lowest in Africa, where the average number of registrations was seven. In Latin America, three countries did not have any ISO 9000 registered companies at all. On the other hand, Brazil had 730 registered companies, so that the average for Latin America was 119. In Asia, the leaders were Taiwan Province of China and India, where there were 487 and 800 ISO 9000 certified companies, respectively. In eastern Europe, Turkey played a leading role, with 185 registered enterprises.

3.3.2 Reasons for applying for ISO 9000 certification

Everywhere, the main reason for a company to apply for ISO 9000 registration was the demand of overseas customers (figure 4). This explains why ISO 9000 certification was most important for exporters. Similarly, an ISO 9000 registration was considered to remove barriers to trade, to open marketing opportunities and to strengthen market share. Furthermore, pressure came from competitors who had already obtained a certificate. Since the pressure from domestic consumers for ISO 9000 certification was very weak, producers for this market did not have a enough incentive to implement the standard. It was definitely not considered an instrument for reinforcing management authority or improving staff morale.

3.3.3 Incentives for SMEs to obtain ISO 9000 certification

About one third of the respondents could not give any reasons for SMEs to implement ISO 9000. This implies that overseas customer demand and strengthening of market share are the main reasons for SMEs to apply for ISO 9000 certification. The other motives that were considered important for larger firms did not influence the decisions of SMEs.

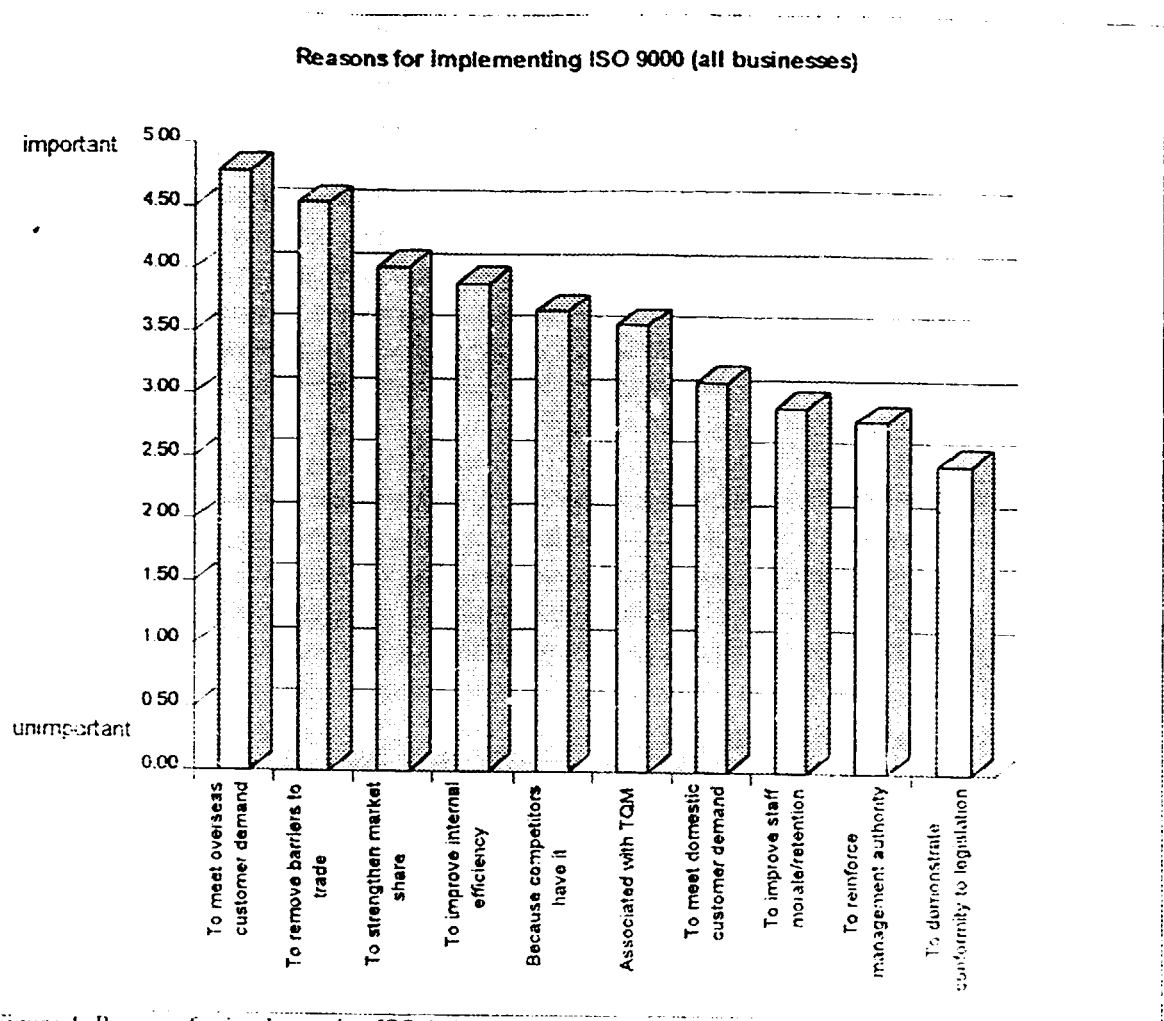


Figure 4 Reasons for implementing ISO 9000

3.3.4 Counter-arguments

Generally, a lack of awareness and the costs of introducing the system were the major counter-arguments. Given the relatively low awareness of the standard in Africa, it was that very lack of awareness that was the main factor deterring companies from ISO 9000 registration. In all the other regions, it was the costs of introducing the system. Costs of registration were also considered to be an important counter-argument, especially in Asia. Some respondents saw insufficient commercial benefit, which was related to a lack of demand from customers and export users, as a reason for not implementing ISO 9000.

3.3.5 Counter-arguments of SMEs

As was true for business in general, the costs of introducing the system were the major obstacle for SMEs. The lack of awareness was more important for SMEs than for other enterprises. Costs of certification also strike SMEs harder than other companies. The great complexity of the standard was also considered to be more of a counter-argument for SMEs than for other businesses. Furthermore, demand for ISO 9000 certification was less among SME customers than among customers of larger enterprises.

3.4 Government support

3.4.1 Promotion of quality awareness

In most of the responding countries, the Governments were promoting quality awareness for business in general. The way in which they did this varied greatly. In some countries (Ghana, Kenya and the United Republic of Tanzania for example) Governments confined themselves to operating through organizations or a national standards body. The Government of Pakistan was closely cooperating with the Pakistan Standards Institute and the Export Promotion Bureau on monitoring developments related to the standard and on organizing seminars and workshops. In Zimbabwe the government was trying to promote quality awareness through speeches of ministers. Other countries (Bolivia, Chile, Indonesia, Morocco, Nigeria and Viet Nam, for example) had organized seminars and congresses or were providing training facilities. The Governments in Malawi, the Philippines and Thailand had sent out newsletters and broadcast radio and television programmes on the subject; Morocco had also organized national and regional "quality days". The Governments of Argentina, Brazil and Tunisia had executed national plans for quality. Barbados, Brazil, India and the United Arab Emirates had sponsored competitions in quality management as an incentive for businesses. Mauritius was cooperating with the World Bank, issuing brochures and organizing seminars.

3.4.2 Awareness raising for SMEs

Only one fifth of the responding countries had launched special awareness programmes for SMEs. In the others there was no focus on SMEs or the respondents simply did not know of any such campaign (about half of the responding countries)

3.4.3 Funding

African governments were seen to concentrate on funding awareness campaigns, but they also provided financial means for training and consultancy. In Latin America, government financial support was relatively meagre, with only two out of seven governments known to support training financially and three of them funding awareness campaigns for quality assurance.

Governments in Asia seemed to be particularly active in promoting and funding activities for quality assurance. More than half of them also provided financial support for training, almost half of them also funded consultancy, and some even funded implementation. Taiwan Province went furthest in supporting compliance with ISO 9000 - its Government promoted registration by taking over all costs and offering it free of charge. Of the European countries surveyed, only Turkey provided financing for awareness campaigns, training and implementation.

3.4.4 Funding for SMEs

In only three countries, Brazil, India and Taiwan, was there special funding for SMEs. Respondents in half of the countries said there was no such funding and those in the remaining countries did not know whether it existed or not.

3.5 Infrastructure for ISO 9000 certification

The infrastructure for ISO 9000 certification is shown in annex 3. Out of 27 countries, only the respondents from Brazil stated that the ISO 9000 standard was mandatory for certain manufacturers. Respondents from two countries said their governments were about to make the standard mandatory. In eight countries, it was thought that the standard should be mandatory.

3.5.1 National accreditation bodies

According to the survey there were 12 national accreditation bodies in the responding countries, half of them in Asian countries. So far there were only two each in Africa, Latin America and eastern Europe. Two more were going to be set up in Latin America, one more in Africa. In about half the countries where there was no national accreditation body, the respondents thought that one should be established.

Only the Brazilian respondents said that their accreditation body had signed mutual recognition agreements with accreditation bodies in Europe. Two more intended to execute such agreements. In half the countries where accreditation bodies did not have mutual recognition agreements, respondents believed that such an agreement should be considered. The accreditation bodies of Brazil, China and the Russian Federation were members of the International Accreditation Forum (IAF), a multilateral forum of national bodies for assessing and accrediting certification bodies.

Almost 80 per cent of the bodies accredited domestic certification bodies and 72 per cent accredited domestic laboratories. Only 28 per cent accredited overseas certification bodies.

3.5.2 National certification schemes

Half of the responding countries (17) had established a national certification scheme, six countries were setting one up. Respondents from the one third of countries where no such scheme existed were of the opinion that a national certification scheme should be established.

Of those countries where certification bodies existed, Kenya and Pakistan did not have domestic certification bodies but rather affiliates of certification companies based in Europe. In the other countries where there were such bodies, they were both international and domestic.

Most certification bodies were under pressure to be accredited. Pressure came mainly from overseas customers but also, to a lesser extent, from domestic customers and legislation. Neither the Standards Association of Zimbabwe nor the National Standards Organization of Sri Lanka were accredited.

Domestic certification bodies from developing countries often faced difficulties in obtaining recognition from trading partner countries. In most of the countries, only some of the foreign trading partners accepted certification by domestic bodies. The domestic certification body in Zimbabwe was not recognized by any of that country's overseas

trading partners. The respondents in almost one third of the countries could not comment at all on this issue.

On the other hand, very few domestic certification bodies had signed mutual recognition agreements with foreign bodies. According to the ISO Directory of Quality System Registrars. Bodies (third edition, 1995), none of the African bodies had signed such agreements. In Latin America, INMETRO (Brazil) and IRAM (Argentina) had entered into bilateral recognition agreements. In Asia, BCC (China), SIRIM (Malaysia) and BPS (Philippines) had signed bilateral agreements. In the European countries under consideration, only Turkey had a signed such an agreement.

In this respect, certification bodies that are based (and thus recognized) in developed countries and that operate affiliates all over the world have a clear advantage in the market.

3.5.3 Product tests

Most certification bodies also carried out product certification. Respondents generally found it hard to tell the difference between product certification for and ISO 9000 certification. According to them, certification bodies in Asia and Africa generally did not demand compliance with both.

3.6 Technical support

The availability of technical support is shown in figure 5. Among the services needed for ISO 9000 implementation, such as information, training and consultancy, information on the standard was the service most available. Still, about 40 per cent of the respondents were not satisfied with the information offered. Certification to domestic requirements was an issue that had been neglected in many countries, even though businesses needed it. The lack of trained assessors was another constraint on the implementation of ISO 9000.

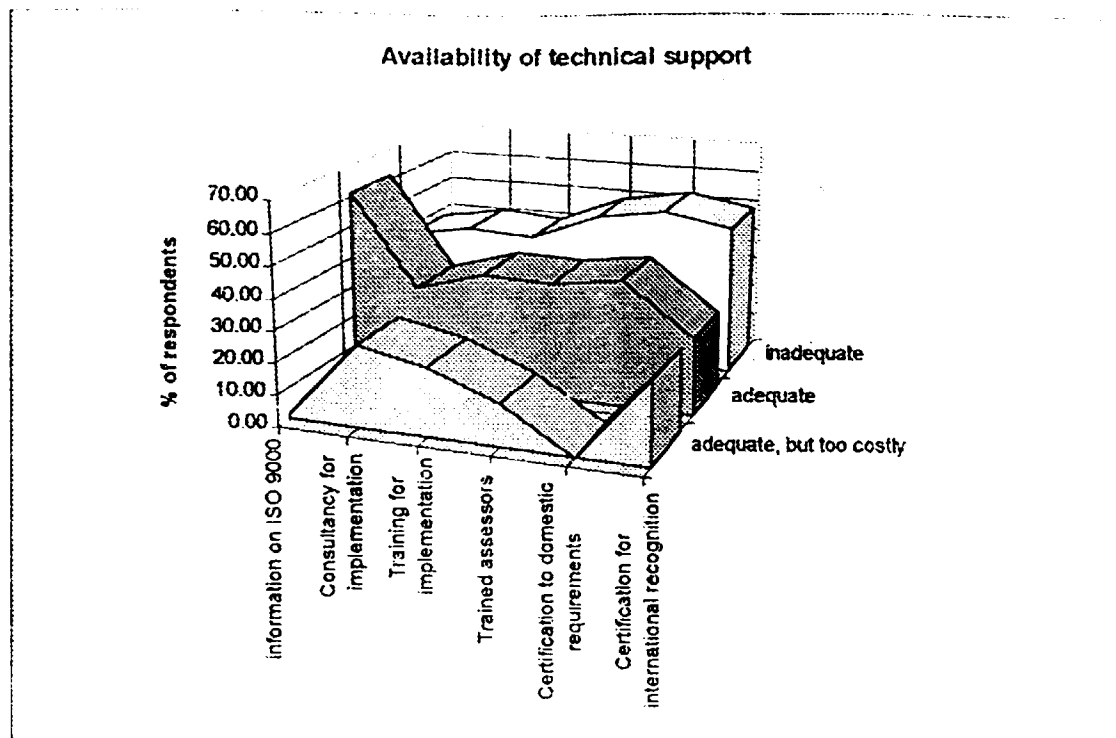


Figure 5. Availability of technical support

Difficulties in obtaining technical support for ISO 9000 implementation were seen to be greatest in Africa. The availability of consultancy was viewed as inadequate by all respondents. The majority of them also considered the availability of training and trained assessors to be inadequate. Information on ISO 9000 was characterized as easily accessible by 40 per cent of the African respondents.

In Latin America, information was available in most of the countries that responded. A lack of trained assessors was a problem in some countries. The number of satisfied and dissatisfied respondents was equally distributed for all the other issues. Respondents thought some services were adequate but too costly.

In Asia, the cost factor was much more important than in any other region. Information was the only service regarded by the majority of the respondents as being easily accessible. Consultancy for implementation, on the other hand, was generally seen as adequate but too costly. Similarly, about one third of the respondents criticized the high costs of training for implementation. Asian respondents cited a lack of technical assistance for certification to domestic requirements. They also called for improved technical support for certification for international recognition, which was either too costly or inappropriate.

Respondents in eastern Europe generally appeared to be satisfied with the supply of technical assistance; only support for certification for international recognition needed to be made available at more reasonable prices.

3.6.1 Cost sharing

Responses on this issue give a clear idea of how to distribute the costs for promoting awareness, consultancy, implementation and registration of ISO 9000 (figure 6).

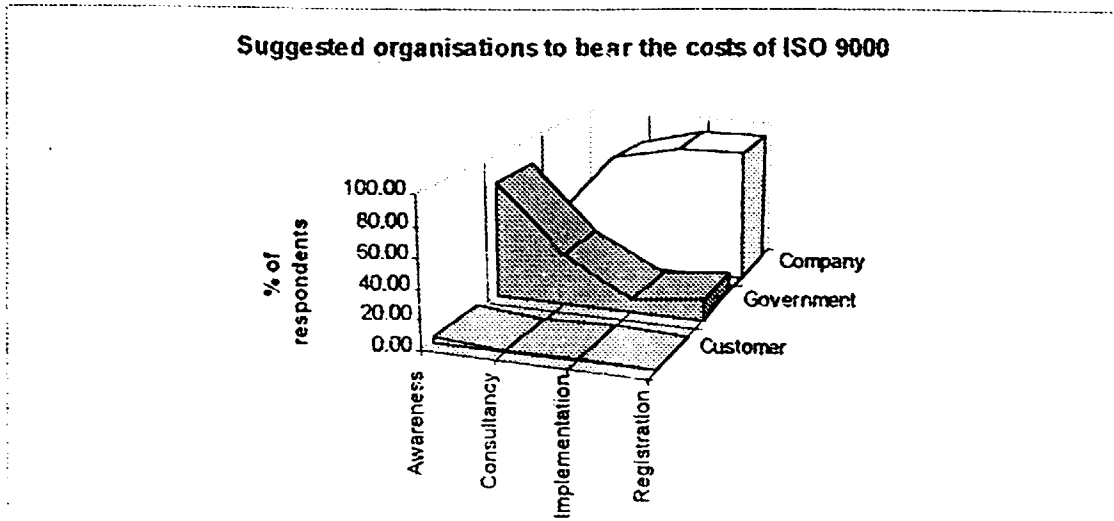


Figure 6. Suggested sharing of costs between various organizations

The majority of the respondents (82 per cent) were of the opinion that the government should bear the costs of promoting awareness. Fourteen per cent of them suggested that the government and companies should share the costs of awareness campaigns. Four per cent believed that customers should also be involved in bearing those costs promotion

An equal percentage of respondents (82 per cent) took the view that companies should pay for consultancy training. The remainder suggested that the Government and the companies share those costs.

It was generally felt that companies should take over the costs of implementation of the standard and the costs for registration. Only one respondent suggested that customers should bear part of the implementation costs.

3.7 Business opinion on ISO 9000 and trade

A clear majority of 91 per cent of the respondents believed that overseas customers were increasingly asking for ISO 9000 certification. Some of the reasons given for this increase are reported in table 1.

Reason cited	Country
Means to avoid multiple audits and certifications	Sri Lanka
Fundamental element of modern trade	Russian Federation
Increasing tendency towards quality products and a trend towards consumer protection	Most respondents

Table 1. Reasons for the growing number of requests for ISO 9000 certification

Respondents from Brazil and Chile, on the contrary, suspected this increasing demand, which was coming mainly from developed countries, to be an instrument to protect producers in developed countries and to close national markets.

Ninety-three per cent of the respondents held that ISO 9000 registration helped to expand international trade. The reasons it did so are shown in table 2.

Reason cited	Country
Necessity for trade	Pakistan, Sri Lanka
Strong overseas customer demand	Morocco, Argentina
Proof of quality that is internationally recognized and thus inspires customers' trust and confidence.	Most other countries

Table 2. Motives for ISO 9000 registration

Only Malawi and the United Arab Emirates thought that ISO 9000 did not help their businesses because of their very limited volume of exports.

About 40 per cent of the respondents felt that overseas customers were reluctant to accept ISO 9000 certificates not issued by their own certification bodies. The reasons for this are shown in table 3.

Reason cited	Country
Lack of confidence due to little knowledge of the local certification schemes	Most countries
Fear of the unknown	Pakistan (one respondent)
Lack good reputation and a well known name	Pakistan and the Philippines
Domestic certification bodies are indeed unreliable	Sri Lanka
Protectionist motives	Brazil (one respondent)

Table 3. Reasons for reluctance to accept foreign certificates

As long as trading partners were reluctant to accept certificates issued by bodies based in developing countries, the only way out, respondents felt, was to apply for certification with an overseas based certification body

Securing an overseas ISO 9000 certification was perceived by 83 per cent of the respondents to be difficult and costly. African respondents were all of this opinion. The high costs of overseas certification come from travel costs, higher charges and the costs of inspection. In any event, all external services are relatively costly for developing countries. The Chinese respondents cited language problems as another reason for the high costs and difficulties.

According to 75 per cent of the respondents, a lack of mutual recognition for ISO 9000 certificates was hindering exporters. Argentina, China, India and Nigeria saw themselves as being forced to apply for multiple certification, and the costs involved hindered their exports. Tunisia also faced difficulties when importing countries refused to admit products that had not been certified in their own certification schemes.

3.8 Quality systems assessment and recognition

One way to improve mutual recognition is participation in quality systems assessment and recognition (QSAR), a proposed global unified scheme to prove the competence of accreditation bodies. Recognition by the QSAR system would, according to 85 per cent of the respondents, facilitate international trade. But most of them expected accreditation bodies from developing countries to have particular difficulties in securing QSAR recognition. Thus they sought external help.

4. Prospects for ISO 14000¹

4.1 Development of environmental issues

4.1.1 Environmental policies and legislation

With few exceptions the countries had established environmental policies, but everywhere there were respondents who were not aware of all the environmental requirements. Indeed, only two thirds of the respondents were fully aware of the content of their country's environmental degradation. One standards body in Africa and one industry association in Latin America answered that the content of environmental laws was completely unknown to them and one third of the respondents admitted they were only partly aware of environmental legislation.

Even fewer respondents were well informed about voluntary agreements. Only 37 per cent claimed to be fully aware of voluntary agreements, with 54 per cent conceding that they were partly aware. The remainder, one respondent from Africa and three from Latin America, replied that they were not aware of the content of any voluntary agreements.

4.1.2 Environmental awareness

In most of the responding countries the Governments had launched campaigns to promote general environmental awareness without focusing on particular sectors. China, however, concentrated its policy on large national companies.

In most countries businesses faced pressure to avoid environmental damage. Environmental organizations and Governments were the main forces promoting environment-friendly production. There were, however, domestic customers and importers that exerted hardly any pressure. Consumer organizations were also very weak in this respect. Overseas customers were fairly important in Asia and less so in the other regions.

About 90 per cent of the respondents recognized growing pressure to avoid environmental damage in their country. The remainder expected pressure to remain constant, none foresaw it declining. About 80 per cent believed that compliance with ISO 14000 would reduce pressure on companies, and about 10 per cent felt the opposite.

¹ Note that by the time the survey was carried out only draft documents of the TC 207 were available.

4.2 Awareness of ISO 14000 Series

For all types of companies and institutions, awareness was highest in Asia and Latin America; in eastern Europe it was unevenly distributed. African respondents showed the lowest awareness levels. The Ghana Chamber of Commerce regretted having been badly informed about the development of the standards, making it unable to inform its members. Similarly, a respondent in Nigeria complained that the ISO 14000 draft should have been sent to all countries regardless of ISO membership.

Even though overall awareness differed greatly from one region to another, the relative awareness of the various types of companies and institutions did not vary greatly.

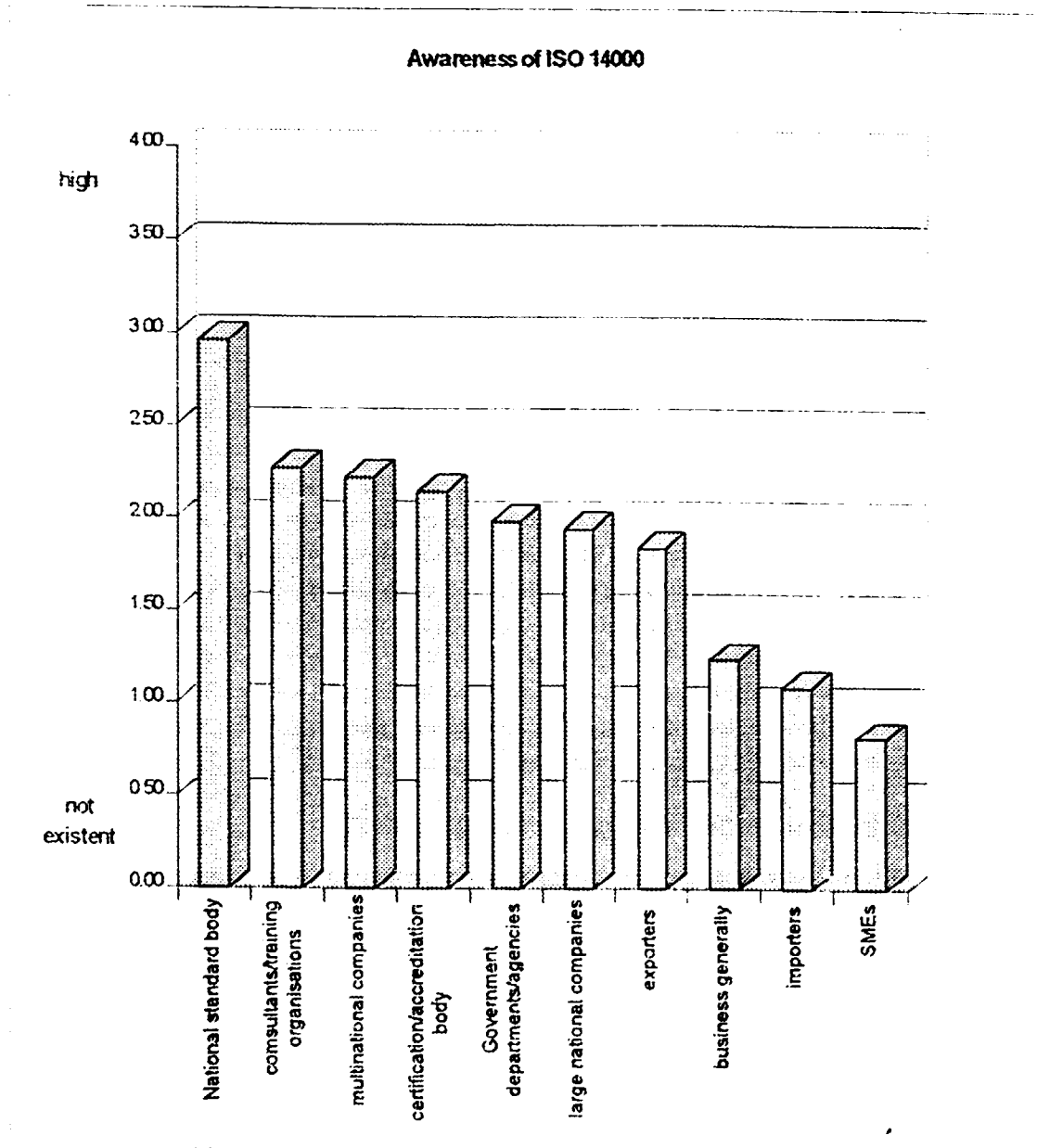


Figure 7 Awareness of ISO 14000 by type of company and institution

The groups that were most aware of the ISO 14000 draft were naturally national standards bodies. On average, consultants and training organizations were in second place, multinational companies in third. Least aware were in all regions were SMEs and importers.

This result reflects the close relationship between either the need or willingness to implement the standard and the level of awareness. Those sectors and institutions that were not likely to be very affected by the standard were more or less unaware of its existence, partly owing to a lack of interest and partly to a lack of information.

4.2.1 Familiarity with the ISO 14000 draft

Much as with awareness, fewer respondents in Africa had seen a draft of the ISO 14000 series, whereas about 70 per cent in Asia and 80 per cent in Latin America and the Caribbean had seen it. None of the respondents from the Russian Federation and Romania had had the opportunity to read the standard, whereas both respondents from Turkey were familiar with it.

Most institutional respondents had received a copy by virtue of their country's membership in ISO; industry had been informed by national standards bodies. Other bodies had had the opportunity to learn about the ISO 14000 series through articles and publications.

4.2.2 Understanding of the ISO 14000 series

Generally speaking, there appeared to be great difficulties in understanding the prospective ISO 14000 series. In Asia, however, Governments, consultants and accreditation and certification bodies seemed to have a fairly good understanding of the prospective standard. In Latin America and Africa even those bodies that had been most involved with the standards said that they did not understand the draft very well. Understanding was particularly poor in Africa, but only slightly better in Latin America, where only accreditation- and certification bodies comprehended the standards at least partly. In all, consumers were expected to be the groups with least understanding of the ISO 14000 series, but there were also very few SMEs who comprehended the standard. It should be noted, however, that consumers, just like SMEs, had not had the opportunity to learn about and to understand the standard.

4.3 Participation in the development of ISO 14000

The proportion of countries participating in the development of the standard was 85 per cent in Latin America and the Caribbean and 60 per cent in Asia. In eastern Europe and Africa only one third of the responding countries had participated in its development.

4.4 Promotion of awareness about ISO 14000

Even though almost all Governments had supported the development of an environmental conscience, very few had publicized ISO 14000. In Africa and Latin America, only one respondent in each region had noticed any special government effort to promote awareness of ISO 14000. Yet awareness of the standard was relatively high in Latin America, and most respondents were familiar with its contents. In Africa, the lack

of government commitment was reflected in the low level of awareness and the lack of knowledge and understanding of the standards. The Government of Turkey had promoted awareness for ISO 14000, but the Governments of Romania and the Russian Federation had not. Only the Asian Governments were relatively active in this respect. Five of the nine surveyed countries had launched an awareness campaign for the new standards.

4.5 Implementation of ISO 14001 (environmental management systems)

4.5.1 Reasons for implementing ISO 14001

The reasons for implementing ISO 14001 are shown in order of importance in figure 8. The main reason for a company's readiness to implement ISO 14001 was to demonstrate conformity to legislation. Especially in Asian countries, this reason was important, whereas in Africa it was less so. The second most important reason was to reduce the costs of implementing environmental mandatory standards. In Latin America this reason was the decisive one. In Africa the most important reason was to meet overseas environmental legislation, an argument that was also very often forwarded in the other regions. Respondents generally were not sure if meeting self-imposed targets, improving staff morale or reinforcing management control could be reasons to implement ISO 14001. Asian respondents for the most part even denied that implementation would improve staff morale. Meeting the demand of domestic customers was the least important argument in favour of applying for ISO 14000 certification.

Similarly, for SMEs the most important reason by far was to demonstrate conformity to legislation. Achieving efficiency in implementing mandatory and voluntary environmental standards also appear to have been essential for SMEs. Least important were improvement of staff morale, meeting of self-imposed targets and strengthening of the market share.

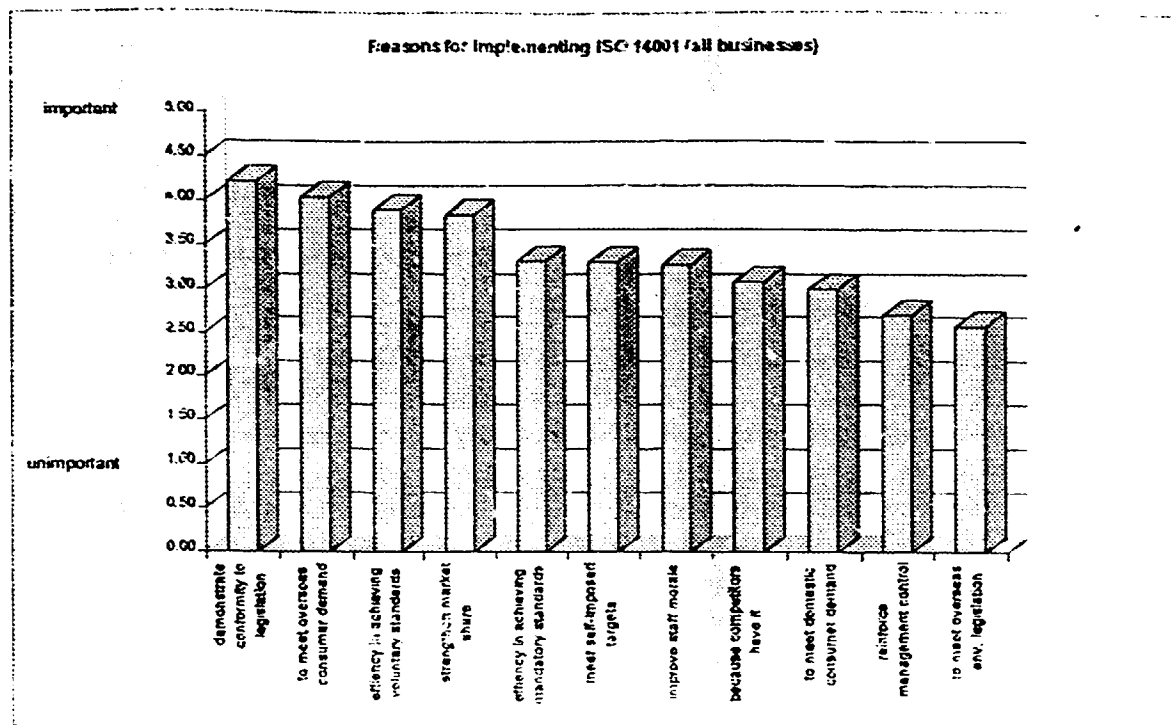


Figure 8. Reasons for implementing ISO 14001

4.5.2 Reasons for not implementing ISO 14001

Of the factors that were expected to deter companies from implementing ISO 14001, the lack of awareness of benefits was the most common. In Africa the lack of technical equipment was another important argument, just as it was in Asia; it was of far less relevance in Latin America or eastern Europe. The lack of consultants was more important in Africa than in any of the other regions. In Latin America, Asia and eastern Europe it was a lack of management commitment that kept companies from applying ISO 14001. But the high costs of setting up an environmental management system also kept companies from participating in the scheme, especially in Latin America and eastern Europe. Few respondents cited impracticability of the standards as an argument against their implementation.

For SMEs, the most important reason for not applying ISO 14001 was the cost of setting up an environmental management system. The lack of consultancy and of awareness of the potential benefits were other weighty counter-arguments. Just as for business in general, the ISO 14000 series was not considered impracticable for SMEs either.

4.6 Expected costs and benefits

4.6.1 Financial burden of existing mandatory standards

Perceptions on whether or not compliance with existing mandatory standards was a significant burden on business varied, depending on whether the respondent was a representative of industry or of administration; it varied also between the regions. Whereas about 10 per cent of the respondents did not see existing mandatory standards as

a significant burden on business, about 50 per cent saw trouble in some cases and 40 per cent viewed legislation as an onerous charge.

4.6.2 Financial burden of voluntary agreements

Half of the respondents could not comment on the effects of voluntary agreements because such agreements did not exist in their country or the respondents were not aware of them. Among representatives of administrative bodies, only four believed voluntary agreements were a burden on companies, whereas most of the industry representatives thought they were. Companies in Latin America and eastern Europe seemed to have least problems with voluntary agreements, whereas African and Asian ones found compliance rather difficult.

4.6.3 Comparison of compliance costs

Systematic data on the costs of compliance with mandatory standards, voluntary agreements and, prospectively, ISO 14001 are not available as fewer than half of the respondents answered the cost question. Most of those who answered thought the costs of mandatory compliance were about 2 per cent of production costs. About 30 per cent of the respondents, primarily from Africa, thought that the costs of mandatory compliance would be over 5 per cent of production costs. Similarly, slightly more than half of the respondents thought that the costs of voluntary agreements would be less than 2 per cent of production costs, but about 10 per cent thought it would be greater than 5 per cent.

	Estimated costs (% of production costs)				
	No cost	< 1	1 -2	2 -5	> 5
Mandatory standards	0	30%	30%	10%	30%
Voluntary agreements	0	56%	6%	25%	13%
ISO 14001	17%	28%	11%	11%	33%

Table 5. Distribution of responses on compliance costs

The respondents were less certain about the costs of complying with ISO 14001, given the distribution of their answers. About half of the respondents thought that the costs of meeting ISO 14001 would be less than 2 per cent of production costs, approximately 15 per cent (all administration bodies) thought there would be no costs at all and approximately one third from both from administrative bodies and industry expected the costs to be greater than 5 per cent of production costs.

4.6.4 Incorporating compliance costs into product prices

About 60 per cent of the respondents believed that compliance costs could, at least for the most part, be incorporated into product prices. Only 4 per cent of them thought that would be impossible.

4.6.5 Cost sharing

When asked about their suggestions for a distribution of the costs related to implementing ISO 14001, industry and administration bodies had a similar opinion: Governments should bear the costs of awareness campaigns, whereas companies should take over consultancy costs, implementation costs and certification costs (figure 9). Promotional costs should be shared equally between Governments and companies. Few respondents suggested that customers be directly made to cover the costs.

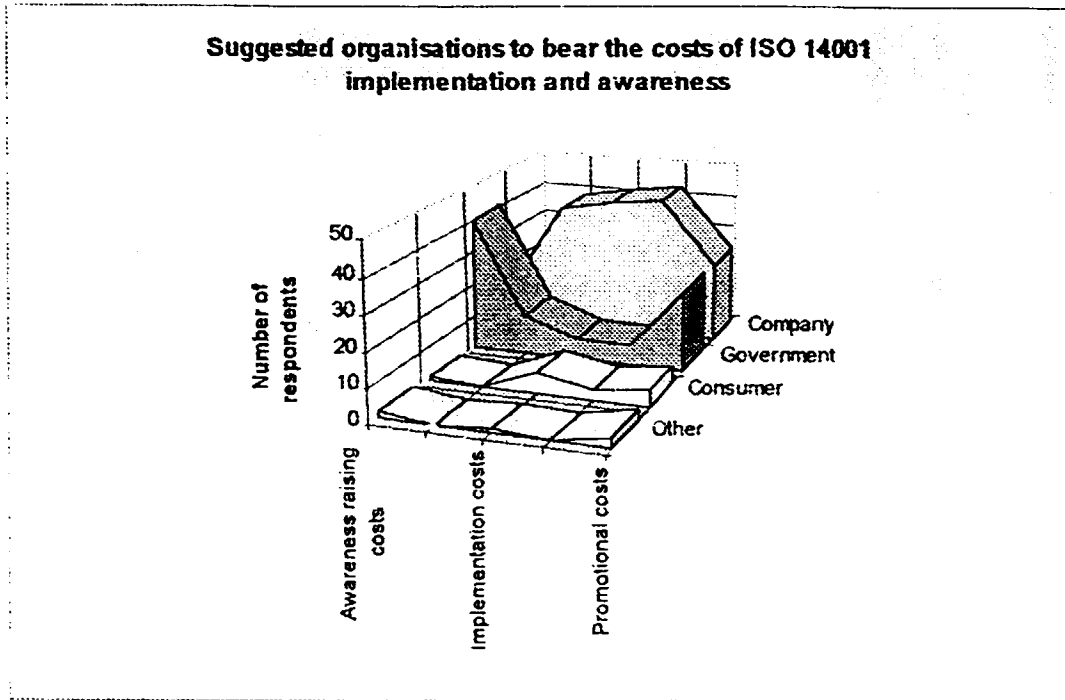


Figure 9. Cost sharing for ISO 14001

4.6.6 Industry migration due to compliance costs

Even though burdens may differ among countries, both industry representatives and administration bodies thought that costs of compliance with ISO 14001 would not cause companies to migrate. Only some Asian and Latin American respondents thought that it would cause companies to relocate to other regions.

4.6.7 Potential benefits of implementing ISO 14001

Administration bodies perceived more than industry representatives the benefits of applying ISO 14001. The majority of administration bodies estimated the potential to save inputs at 10 - 30 per cent, whereas industry, on average, estimated less than 10 per cent. Only three African administration bodies were of the opinion that implementing ISO 14001 would not lead to any input saving at all. By contrast, the Indian standards body estimated the potential of input saving at more than 50 per cent. Figure 10 illustrates the input saving potential as estimated by all respondents.

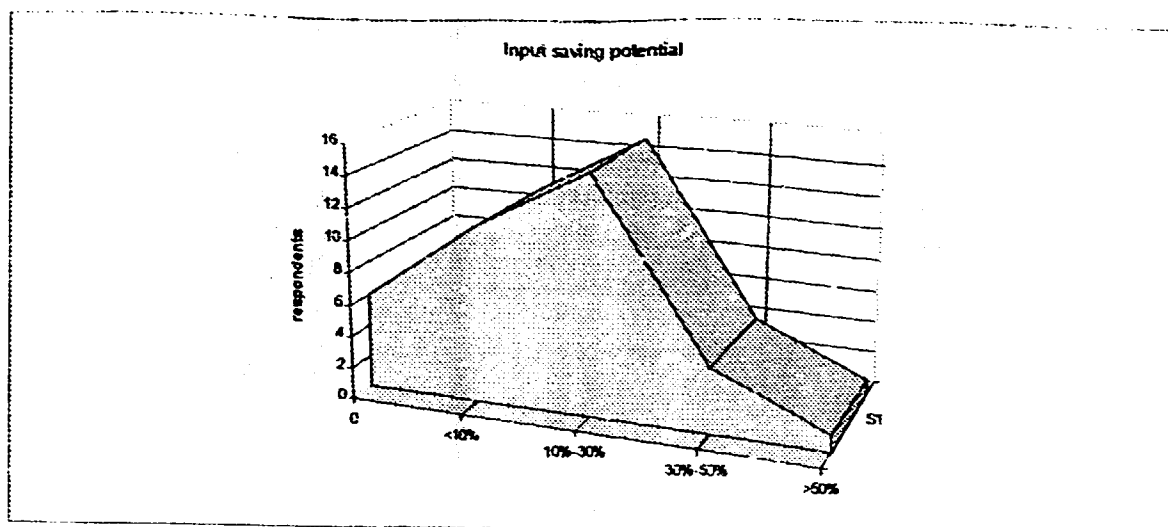


Figure 10. Input saving potential

Similarly, administration bodies held a more optimistic view of the possibilities of improving the market position by implementing ISO 14001. Unanimously they expected a strengthening of the market position for companies, although to varying extents. The majority of the industry representatives also thought that their market position would be improved by adopting ISO 14001, but several expected very little positive effect or even none on their market position.

4.7 Infrastructure for ISO 14001

4.7.1 Accreditation bodies

In all regions, respondents in about 50 per cent of the countries thought that a national accreditation body for ISO 14001 would be established. The respondents in one quarter of the countries did not know whether such a body would be set up or not. They envisioned the types of infrastructure shown in annex 4. The remainder said their countries would not have a national accreditation body. About 65 per cent of the respondents held the view that accreditation bodies should be public and 10 per cent (the respondents from Argentina and Ghana) thought they should be private. One quarter of the respondents did not have an opinion. All of the bodies would accredit domestic certification bodies. More than half of them would also accredit overseas and international certification bodies.

Respondents were convinced that most of their countries would seek mutual recognition agreements with other countries, but they considered it premature to suggest partner countries. Still, respondents from Argentina, Ghana, Indonesia and Pakistan thought that agreement would be sought with European and United States accreditation bodies. The respondent from Malawi suggested a convention on mutual recognition among all ISO member countries; a respondent from Bolivia suggested doing so with as many countries as possible. Nigeria would profit from an agreement with the Economic Community of West African States (ECOWAS)

4.7.1.1 *Single accreditation body for ISO 9000 and ISO 14001*

Three quarters of the respondents supported the view that there should be a single accreditation body for both ISO 9000 and ISO 14001 registration (figure 11). In Latin America all respondents except one shared this opinion. Only in Africa did most of the respondents speak in favour of establishing separate accreditation bodies.

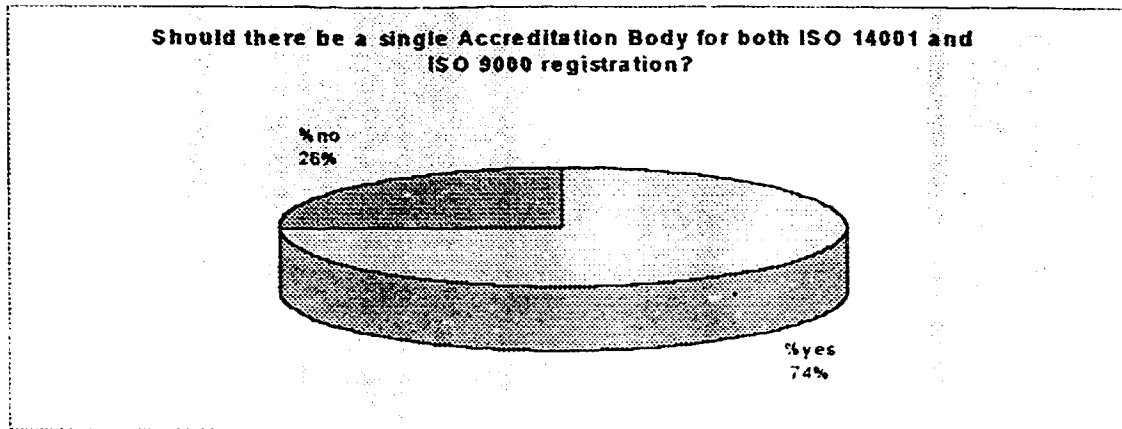


Figure 11. Single accreditation body for ISO 9000 and ISO 14001

Most respondents took the view that a single body would be useful because the standards were analogous. In that way, existing infrastructure could be used, taking advantage of experience, skills and synergies and thus saving costs. The system would be less complex and confusion could be avoided. Respondents from Barbados and the Philippines suggested that environmental management systems (EMS) should be completely integrated into total quality management (TQM) and thus be administered by the same institution. Other respondents, by contrast, feared that administering both standards would overload a single body and prevent it from being able to provide its services in a satisfying manner. The respondent from Indonesia argued that ISO 9000 and ISO 14000 belonged to different spheres of government, which would make it difficult to unify administration bodies. Still, others opposed the creation of a single body for both standards because there were substantive differences between quality and environmental issues

4.7.1.2 *International acceptance*

Most respondents expected their national accreditation bodies to have difficulties in meeting the requirements for international acceptance. Only respondents from Pakistan, the Philippines, Sri Lanka and Taiwan Province did not foresee any problems at all. On average, Asia's prospective accreditation bodies seemed likely to be best equipped to meet international requirements. African respondents unanimously thought that their bodies would face great trouble in securing international recognition

4.7.2 *National certification schemes*

There was a lot of uncertainty about whether countries would set up a national certification scheme for ISO 14001. More than half of the responding countries would

Still, the respondents of two thirds of the countries thought such a scheme should be created. Overall only 13 per cent of the countries had decided to put in place a certification scheme; in one third of them the matter was unclear.

One half of the respondents took the view that certification bodies should be public and one third supported private bodies. In Africa, Asia and eastern Europe, a majority spoke in favour of public certification bodies. Only Latin American respondents unanimously preferred private bodies. Almost 90 per cent of the respondents proposed that domestic certification bodies should register domestic companies, public or private. About 60 per cent held the view that they should also certify domestic companies based overseas, and approximately 45 per cent advocated the certification of overseas companies.

4.7.2.1 International acceptance

National certification bodies, like domestic accreditation bodies were expected to face difficulties in meeting the requirements for international acceptance. African certification bodies were seen likely to have the greatest trouble in securing international recognition. Still, respondents from the Philippines and Taiwan Province did not expect their certification bodies to have any problems at all.

4.7.2.2 Single certification body for ISO 9000 and ISO 14001

As with accreditation bodies, about 70 per cent of the respondents suggested using the same certification bodies for ISO 9000 and ISO 14000 certification. Only in Africa did half of the respondents advocate separate bodies for these standards.

4.7.3 Resources and constraints

In general, respondents expected to have some difficulties in accessing the resources needed to meet ISO 14001 (figure 12). Especially in Africa, respondents faced trouble, whereas in Asia and Latin America a respectable number expected to have easy access to the necessary resources. A lack of local consultants was one of the major constraints on companies that would be willing to implement ISO 14001. In Africa the lack of consultancy was particularly striking. Only three respondents, from Argentina, India and Pakistan, were content with the availability of consultants. As a consequence, companies would have to rely at least partly on overseas expertise. African respondents in particular expected a high degree of dependence on foreign consultants.

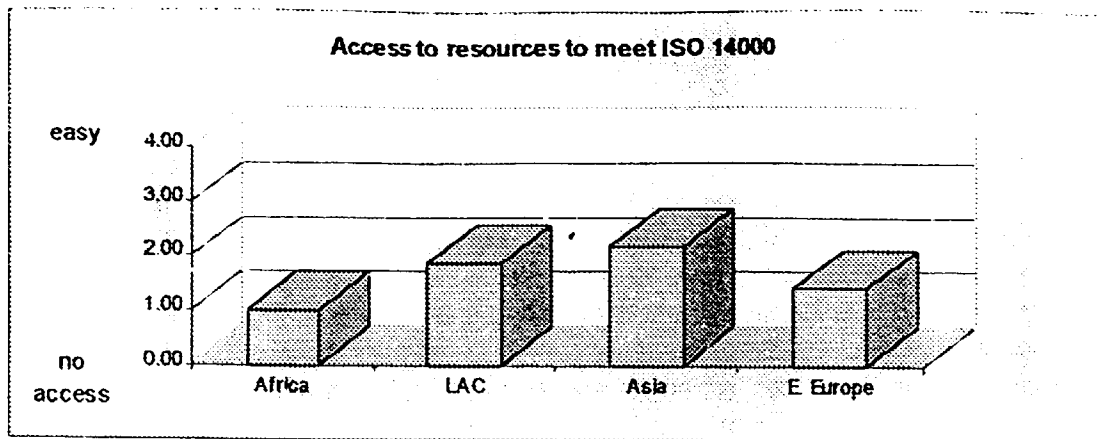


Figure 12: Access to resources

4.8 ISO 14001 and trade

Existing overseas environmental requirements did not have the same effect on all responding countries or organizations. In each of the regions the number of those who felt exports had been hindered by overseas environmental legislation was almost equal to the number of those who felt it had not been. Only in African countries did a clear majority of organizations and companies consider overseas environmental standards an obstacle to trade. In particular, the European Union regulations (EMAS) as well as various product standards were considered to have a negative effect on trade.

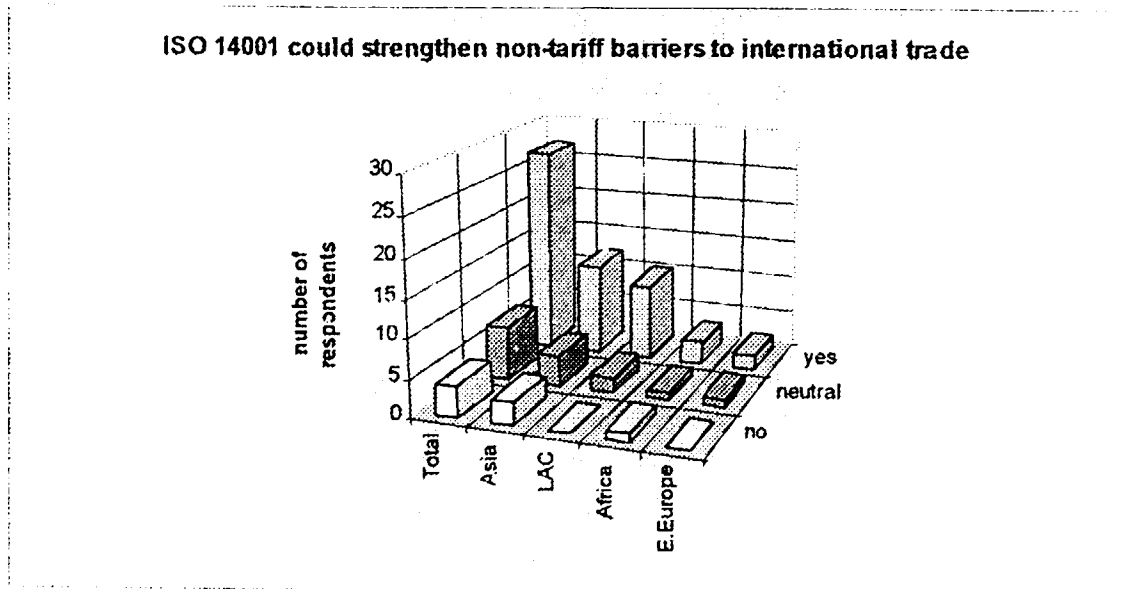


Figure 13. ISO 14001, barrier to trade?

By contrast, the majority of the respondents expected ISO 14001 to strengthen non-tariff barriers to trade (figure 13). In Asia, this fear was particularly widespread, even though most respondents also feared a loss of market if ISO 14001 was not introduced. Sri Lanka and Tunisia expected their products to be rejected by customers. Nigeria and Brazil foresaw a multitude of approaches, standards and regulations. Brazil had had a

particularly bad experience with the subjectivity of the European Union regulations and other national standards. A respondent from Pakistan feared it would be difficult to convince customers of the environmental efforts taken during production.

4.8.1 Measures to mitigate the negative effects of ISO 14001 on international trade

The respondents identified a number of measures that could reduce the negative effects of ISO 14001 on international trade:

- The respondents from Thailand and the United Arab Emirates emphasized that ISO 14001 had to be maintained on a voluntary basis. Making it obligatory would definitely raise a barrier to trade. Most other countries called for unification of the certification scheme, because the lack of recognition and differences between schemes were the main obstacle to obtaining equal opportunities for all participants.
- One respondent from India suggested that international organizations like UNIDO, the World Bank or the World Trade Organization could grant financial help to developing countries. A Colombian respondent advocated worldwide promotion of awareness, provision of training and technical support for industry and up-grading of national environmental standards to accord with international requirements. An Indonesian respondent supported the latter idea. He said improvement and stricter implementation of national environmental legislation would help to overcome the disparities between developed and developing countries.
- Chilean and Indian respondents spoke in favour of a phased introduction of the standard, to give sufficient time to adapt it gradually.
- The respondent from Barbados thought that incorporating EMS into TQM and QSAR structures would be the appropriate way to avoid barriers to trade.
- Quite a few respondents shared the opinion that the more common the standard became, the more barriers to trade would shrink. On the other hand, there were respondents who did not see any possibility of reducing barriers to trade within the framework of ISO 14001.

4.9 Eco-labelling

Most respondents found that the diversity of national eco-labels hindered their export opportunities. Only one Pakistani company and one Pakistani industry association did not have any problems with overseas eco-labels. Eighty per cent of the respondents were therefore convinced that internationally recognized labels would improve export opportunities. Only two respondents from India were not so sure about the positive effects of international recognition. Altogether, 90 per cent of the respondents believed that an international environmental labelling guideline like ISO 14020 could indeed lead to harmonization.

4.10 Conclusion

The biggest problem related to the introduction of ISO 14000 was the lack of recognition for local accreditation and certification bodies and local certificates. Such a lack would

make the standard useless, and it would merely be a protectionist instrument for developed countries. Therefore the need to harmonize certification procedures was the top concern expressed by the respondents. International recognition institutions were suggested, but QSAR was not expected to work very effectively. Furthermore the process of awarding the certificate needed to be more transparent.

5. Tables

Table 1. Reasons for increasing request for ISO 9000 certification

Table 2. Motives for ISO 9000 registration

Table 3. Reluctance to accept foreign certificates

Table 4. Estimation of compliance costs

6. Figures

Figure 1 Geographic structure of respondents

Figure 2. Organizational structure

Figure 3. Awareness of ISO 9000

Figure 4. Reasons for implementing ISO 9000

Figure 5. Availability of technical support

Figure 6. Cost sharing

Figure 7. Awareness of ISO 14000/sectors

Figure 8. Reasons for implementing ISO 14001

Figure 9. Cost sharing ISO 14000

Figure 10. Input saving potential

Figure 11. Single accreditation body for ISO 9000 and ISO 14001

Figure 12. Access to resources

Figure 13. ISO 14001, barrier to trade?

7. Annexes

Annex 1. Questionnaire

Annex 2. List of respondents

Annex 3. Infrastructure for ISO 9000 certification

Annex 4. Infrastructure envisaged by respondents for ISO 14001 certification

UNIDO

United Nations Industrial Development Organisation

Questionnaire

**Trade Implications of
International Standards
for Quality and Environmental
Management Systems
(ISO 9000/ISO 14000 Series)**

Implemented by Resource

On behalf of UNIDO

CONTENTS

Introduction

Section I : Your Organisation

Section II : Experience with the
ISO 9000 Series Standards for
Quality Management Systems

Section III : The Proposed ISO 14000
Series of Standards

INTRODUCTORY NOTES

The growing popularity of quality management systems for business activities has led to world-wide recognition of the benefits achievable through the implementation of the ISO 9000 series of quality management standards. Over 90 countries have now adopted the ISO 9000 series as the model for their own national standard for quality management. For many companies in developing countries, however, lack of awareness of these benefits and constraints on achieving and demonstrating conformity with the ISO 9000 series, particularly to overseas customers, may be an obstacle to achieving a company's trading potential.

UNIDO and ISO need your help in researching issues affecting the implementation of the ISO 9000 series in developing countries and whether similar considerations are likely to arise with the introduction later this year of the ISO 14000 series of standards for management systems to monitor and reduce the impact of business activities on the environment. This questionnaire seeks information required for an expert review of these issues. The findings will form the basis of a report to ISO, WTO, CSD that addresses the concerns of developing countries about ISO 9000 and 14000.

The ISO 9000 Series of Quality Management Standards

The ISO 9000 series of standards provides criteria and guidelines for establishing systems to ensure consistent quality in both manufacturing and service activities. Demonstration of compliance with the Standard increasingly requires assessment and certification (or registration) of a company's quality management systems by an independent certification body, either domestic or international. To help secure international recognition of such certificates, most certification bodies are themselves accredited by a third party organisation, usually government appointed. Mutual recognition of the competence of accreditation and certification bodies facilitates international acceptance of company-held ISO 9000 certificates and thereby encourages the expansion of international trade. Conversely, difficulty in securing international recognition for locally issued ISO 9000 certificates may create a barrier to trade.

Quality Systems Assessment and Recognition (QSAR)

QSAR is a global unified scheme, developed by ISO in association with the International Electrotechnical Commission (IEC), to enable certification bodies to obtain international acceptance of their competence and therefore the validity of the ISO 9000 certificates which they issue. It will operate a procedure for international recognition of accreditation bodies, each of which will be assessed by their peers in other countries against mutually agreed criteria derived from ISO/IEC guides. It is expected that a founding membership of 10 accreditation bodies will be in place later this year.

Background Information on the Proposed ISO 14000 Series of Standards

Various parts of the proposed ISO 14000 Series of Standards are expected to be progressively published as Draft International Standards (DIS) from June 1995.

(a) **ISO 14001 - Environmental Management System (EMS)**

ISO 14001 will provide organisations with a specification on how to implement and improve an EMS.

It will contain those system elements that may be objectively audited for certification/registration purposes and for self declaration purposes. It will not itself state specific environmental performance criteria, but will require an organisation to formulate a policy and objectives taking into account National legislative requirements and significant environmental impacts.

Establishment and maintenance of an EMS enables an organisation to anticipate and meet growing environmental performance expectations, to ensure ongoing compliance with national and/or international requirements and to support continual improvement of its environmental performance.

In order to ensure the effectiveness of such an EMS according to its objectives the following core elements of an EMS should be implemented:

- Environmental Policy: Statement by the organisation of its intentions and principals in relation to its overall environmental performance.
- Planning: including the identification of environmental aspects and legal requirements as well as the setting of objectives and an environmental management programme.
- Implementation & Operation: of required actions, such as structures, responsibilities, training, awareness, communication, documentation, control and emergency preparedness.
- Regular checking & corrective actions: (eg monitoring, measuring and auditing)
- Management review: check EMS' continuing suitability, adequacy and effectiveness according to its objectives and changing circumstances.

(b) **ISO 14010, ISO 14011, ISO 14012: Environmental Auditing (EA)**

The general purpose of ISO 14010 will be to inform organisations about the general principles common to the execution of environmental audits. Whereas the ISO 14011 will provide specific procedures for the conduct of EMS audits. ISO 14012 will address the qualification criteria for auditors.

The main objectives of conducting an environmental audit will be to determine conformity with ISO 4001, as well as to identify areas of potential improvement within the EMS.

(c) **ISO 14020: Environmental Labelling (EL)**

This international standard will contain guiding principles and practices, criteria procedure and guidance for certification procedures for the development of multi criteria-based, third party certified environmental labelling. Note that, currently, it is not intended to create an international label for which an organisation could apply. ISO 14020 is at this point only a guidance for national labelling schemes aiming at harmonisation of National schemes world-wide.

Environmental labelling, in this context, means the use of labels in order to inform consumers that a labelled product is environmentally more friendly relative to other products in the same category. The criteria for the award of a label call for an overall assessment of the environmental impact of a consumer product during its life cycle.

Small and Medium Sized Enterprises (SME)

The cost of compliance with international standards for quality management and environmental management may have a disproportionate impact upon SME's. The questionnaire therefore pays particular attention to the implications for SME's of certain issues raised by these international standards.

Definitions of SMEs vary from country to country. In completing the questionnaire you are invited to state and use your own national definition. Where none exists, we suggest that SME's are businesses of less than 200 employees.

Accreditation

Accreditation is the process of approval of an organisation (certification body) wishing to certify other companies' quality systems (and probably environmental management systems). Usually a body of national standing acting on behalf of or as advisory to Government or government department.

Certification (Also known as Registration)

Certification is the approval of public and private sector enterprises' management systems against those requirements stated in accepted standards for such management systems. For credibility purposes, certification should be carried out by third party bodies, essentially independent of any statutory influence or commercial interest and preferably, but not mandatorily, accredited by a recognised (either national or international) accrediting body.

Enquiries and Returns

Any queries or comments relating to this questionnaire and its return should be addressed to:

Barry Martindale (Regional Manager)
Resource (Science & Technology Expertise) Ltd
1-3 Birdcage Walk
London
SW1H 9JH

Tel: +44 171 222 5371
Fax: +44 171 222 0197

Resource (Science & Technology Expertise) Ltd
March 1995

Section I: About Your Organisation

Name of Organisation:

Address:

Contact:

Telephone:

Telefax:

Nature of Organisation :

- | | | |
|-------------------------|--------------------------|--------|
| Government Department | <input type="checkbox"/> | |
| National Standards Body | <input type="checkbox"/> | |
| Industry Association | <input type="checkbox"/> | Sector |
| Certification Body | <input type="checkbox"/> | |
| Accrediting Body | <input type="checkbox"/> | |

Is your Country associated with ISO:

- | | |
|--------------------------------|--------------------------|
| as a full member | <input type="checkbox"/> |
| as a subscriber member | <input type="checkbox"/> |
| as a correspondent member | <input type="checkbox"/> |
| membership applied for | <input type="checkbox"/> |
| membership under consideration | <input type="checkbox"/> |
| not a member | <input type="checkbox"/> |

Section II: The ISO 9000 Series of Management Systems Standards for Manufacturing and Services

This section seeks information about perceptions the ISO 9000 series of quality management standards and your country's experience with implementation and related issues of conformity assessment. Even if experience of the standard is minimal (say less than 10 local registrations) your opinion in answer to more general questions would be most welcome.

General Awareness

II.1 Is awareness of the ISO 9000 Series by all business

	high		low
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Which sectors are most aware

.....

II.2 Is awareness of the ISO 9000 Series in

	high		low
--	------	--	-----

Multinational companies based in your country	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Large National Companies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small/Medium National Companies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Note: see definition for Small/Medium Enterprises)

Perceived Importance of ISO 9000 by business

	Current			Expected Trend		
	High	Low	None	Greater	Same	Less
II.3 For exporters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
II.4 For importers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
II.5 For Domestic Producers (for domestic market)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
II.6 For SMEs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

II.7 For exporters is importance related to specific export markets

Yes No Which markets

.....

Popular Perceptions of ISO 9000 in:

II.10 ISO 9000 is seen as appropriate by	Your Organisation	Business Community	SMEs	Consumers
For:				
Exporters only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Home markets suppliers only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturers only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Both manufacturers and service providers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All businesses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private sector only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public sector only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Implementing the ISO 9000 Series

II.11 How many companies in your Country have registered an ISO 9000 system _____

If more than 30

(a) numbers of registrations by company size:

Multinational _____
 Large National _____
 SME _____

(b) which sectors have most registrations _____

II.12 Companies' reasons for implementing the ISO 9000 Series:

	All businesses					SMEs				
	Important	Unimportant	Important	Unimportant	Important	Unimportant	Important	Unimportant	Important	Unimportant
To improve internal efficiency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Associated with TQM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To meet domestic customer demand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To meet overseas customer demand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To strengthen market share	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To demonstrate conformity to legislation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To improve staff morale/retention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Because their competitors have it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To reinforce management authority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To remove barriers to export trade	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Is this information based on

Survey data

or

Anecdotal evidence

Can we have a copy?

II.13 Companies' reasons for NOT implementing the ISO 9000 Series

	All businesses					SMEs				
	Important	Unimportant				Important	Unimportant			
Lack of awareness of the ISO 9000 Series	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost of introducing up an ISO 9000 system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost of registration/certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not needed for export users	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No demand from customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Too complex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insufficient commercial benefit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of management commitment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Is this information based on

Survey data

Can we have a copy?

or

Anecdotal evidence

Regarding your National Infrastructure for Conformity Assessment

Government Support

II.14 Does the Government promote quality awareness in business

Yes No

For all businesses

SMEs only

How _____

II.15 Does the Government support compliance with the ISO 9000 Series with

Yes No

Funding for awareness campaigns

Funding for consultancy

Funding for training

Funding for implementation

Funding for SMEs only

Other _____

II.16 Is there legislation making conformity with the ISO 9000 Series mandatory for certain manufacturers

Yes Pending No Should be

Accreditation

II.17 Does your country have a National Accreditation Scheme

Yes Pending No Should do

If not, proceed to question II.22

II.18 If so, what is the National Body's name _____

II.19 Is it associated with Government

Yes No

II.20 Does your National Accreditation Body have mutual recognition agreements with other countries

Yes Pending No Should do

With whom _____ To do what _____
_____ (briefly) _____

II.21 Does your main National Accreditation Body accredit

Domestic Certification Bodies
Domestic Laboratories
Overseas Certification Bodies

Certification

II.22 Does your country have a National Certification scheme for registration to ISO 9000

Yes Pending No Should do

II.23 If so, how many:

Domestic Certification Bodies _____ Names _____
Overseas Certification Bodies _____ Names _____
(issuing certificates in your country) _____
Overseas Certification Bodies _____ Names _____
(with an office in your country) _____

II.24 Is certification from your domestic certification bodies recognised by trading partner countries

- Most partners
- Some partners
- Main partners
- Only for certain sectors Which? _____

II.25 Are any of the certification bodies operating in your country accredited by:

	Yes	How many
Domestic Accreditation body only	<input type="checkbox"/>	_____
Overseas Accreditation body only (Which body/country? _____)	<input type="checkbox"/>	_____
Both Domestic and at least one overseas body (Which body/country? _____)	<input type="checkbox"/>	_____
Not accredited at all	<input type="checkbox"/>	_____

II.26 Is there any pressure on Certification Bodies operating in your country to be accredited

Yes Sometimes No Should be

II.27 Where does this pressure originate

- Legislation requirement
- Domestic customer requirement
- Overseas customer requirement

II.28 Do any Domestic Certification bodies have mutual recognition agreements with overseas bodies

Domestic Body	Overseas Body	To do what (briefly)
_____	_____	_____
_____	_____	_____

II.29 Does your main domestic certification body also test products

Yes No

II.30 If so, does it insist that conformity with ISO 9000 is necessary as well as compliance with the appropriate product standard itself

Yes No

ISO 9000 Series and International Trade

II.34 In your opinion how would businesses in your country respond to the following propositions

- | | Agree | Disagree |
|--|--|----------|
| (a) ISO 9000 registration helps to expand our international trade
Why _____ | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| (b) overseas customers increasingly request an ISO 9000 certification
Why _____ | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| (c) overseas customers are reluctant to accept ISO 9000 certificates issued other than by their national certification bodies
Why _____ | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| (d) securing certification by an overseas certification body is difficult/costly
Why _____ | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| (e) lack of mutual recognition of ISO registration certificates hinders exporters
Why _____ | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| (f) small exporters benefit most from ISO 9000 registration
Why _____ | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| (g) ISO 9000 registration helps domestic producers compete against imports
Why _____ | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |

II.35 Any other comments

Section III: The Proposed ISO 14000 Series

Significance/Development of Environmental Issues

III.1 Does your government have a declared policy on environmental issues

Yes No

III.2 Are you aware of the contents of National environmental

	Not available	Yes	Partly	Not at all
mandatory requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
voluntary agreements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III.3 Is your local business under pressure to avoid environmental damage and if yes where does this pressure originate from

	Yes	No		
originated from:	<input type="checkbox"/>	<input type="checkbox"/>	< Pressure >	
	high	low	<	>
government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
general public interest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
domestic customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
overseas customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
domestic/international companies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
importers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
organisations (trade)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
organisations (consumer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
environmental organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III.4 Are these pressures

growing constant declining

III.5 Do you think compliance with the ISO 14000 series would lead to less pressure

Yes No

Awareness/Perceptions of the ISO 14000 Series

III.6 Is present awareness of the proposed ISO 14000 series in

	high			non existent	
govt depts/agencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
national standard body	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
certification/accreditation body	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
business generally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
multinational companies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
large national companies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SMEs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
exporters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
importers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
consultants/training organisations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III.7 Has your organisation seen a draft of the ISO 14000 series (or any part of it)

Yes No

Which? _____ Where from? _____

III.8 Is your country participating in developing/commenting on these standards

Yes No

How _____

III.9 Does the government have an active policy to promote environmental awareness in industry

		All business	Large companies only	SMEs only
Yes, general awareness	for	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes, ISO 14000 series	for	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No		<input type="checkbox"/>		

III.10 Are the objectives of the ISO 14000 series standards well understood

as viewed by

	Fully			Not at all	
government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SME	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
consumer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
consultants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
accreditation/certification bodies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III.11 Do you think that compliance with the requirements of the ISO 14001 management model would facilitate wider compliance with local environmental requirements

Definitely Definitely Not

III.12 In your opinion, which factors are likely to influence business in favour of adopting the ISO 14001 specification

	All business					SME				
	high			low		high			low	
To demonstrate conformity to legislation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To improve internal efficiency in achieving voluntary environmental standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To improve internal efficiency in achieving mandatory environmental standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To meet domestic consumer demand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To meet overseas consumer demand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To meet overseas environmental legislation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To meet self imposed environmental targets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To strengthen market share	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To improve staff morale/retention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Because competitors have it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To reinforce management control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III.13 Similarly, which factors might deter business from adopting the ISO 14001 specification

	All business					SME				
	high			low		high			low	
Lack of awareness of benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost of consultancy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost of setting up an ISO 14001 EMS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost of registration/certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adoption of such standards will expose non-compliance to legislation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adoption of standards will generate more legislation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of local demand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of overseas pressure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Impracticality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low commercial return	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No management commitment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of technical equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of competence/experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III.14 Do you believe ISO 14001 management systems should be adopted by:

	Always				Never
exporters only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
manufacturers only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
public sector companies only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
private sector companies only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
all businesses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
retailers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
service providers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
none	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Cost of Compliance

III.15 Is compliance with existing mandatory environmental standards a significant burden on business

Yes In some cases Which? _____ No

III.16 Is compliance with existing voluntary environmental agreements a significant burden on business

Yes In some cases No, there aren't any No

III.17 How much in percent of annual production cost are/would compliance costs for:

	mandatory standards	voluntary standards	ISO 14001
No cost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Less than 1%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1% - 2%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2% - 5%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
more than 5%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III.18 Could the costs of compliance with ISO 14001 be incorporated into prices of products

Yes No

III.19 Should the costs of the following facets of the ISO 14001 management model be borne by

	Govt	Company	Consumer	Other
Awareness raising costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consultancy costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Implementation costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Certification costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Promotional costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III.20 Should the government support compliance with voluntary environmental standards (including the proposed ISO 14001 model) by

	Full	Part	Not
Funding for awareness campaigns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Funding for consultancy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Funding for training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Funding for implementation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Funding for certification/registration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Funding for accreditation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III.21 Would the costs of compliance to ISO 14001 lead to migration of companies to other regions

Yes				No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III.22 Do you think compliance with ISO 14001 could reduce your inputs of energy and raw materials and therefore lessen your costs

Yes, more than 50%	<input type="checkbox"/>
Yes, between 30% and 50%	<input type="checkbox"/>
Yes, between 10% and 30%	<input type="checkbox"/>
Yes, less than 10%	<input type="checkbox"/>
No	<input type="checkbox"/>

III.23 Do you think that compliance with ISO 14001 could help you access new markets or strengthen your market position

Yes				No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Infrastructure

Accreditation

III.24 Will your country have a National Accreditation Body for ISO 14000

Yes No

III.25 Who will it accredit

Domestic certification bodies	<input type="checkbox"/>
Overseas certification bodies	<input type="checkbox"/>
International certification bodies	<input type="checkbox"/>

III.35 Would you expect developing countries to have difficulty in meeting requirements for international acceptance of National Certification Bodies

Great difficulty No difficulty

III.36 Should certification be done by bodies already certifying against ISO 9000 series standards

Yes No

III.37 Does local business have access to the necessary skills, experience and human and other resources to meet the requirements and guiding principles of the ISO 14000 series

Yes No

III.38 Will compliance with ISO 14001 specification be constrained in your country by shortages of qualified consultants, training and auditors

Yes No

III.39 Would business have to rely on overseas sourcing for such qualified expertise

Yes No

International Trade

III.40 Are overseas environmental requirements already a barrier to your exports

Yes No

If Yes, examples _____

III.41 Do you foresee circumstances in which the introduction of ISO 14001 could strengthen non-tariff barriers to international trade

Yes No

III.42 How could such barriers be avoided

III.43 What would the consequences in terms of international trade and competitiveness for your exporting companies be if ISO 14001 was not introduced

III.44 On balance will implementing an ISO 14000 EMS help or hinder

	Yes				No
Exporters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Importers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Domestic companies trading internally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SMEs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Labelling

III.45 Does the existence of different national labels hinder your export opportunities

Yes				No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III.46 Do you think that internationally recognised environmental labels, for products, whether they are national or international ones, could improve or hinder your export opportunities

Improve			Hinder	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III.47 Do you think that the introduction of an international environmental labelling guideline like ISO 14020 will lead to a worldwide harmonisation of national labelling

Yes				No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III.48 Any other comments

* NOTE: PLEASE ATTACH ANY WRITTEN INFORMATION ON ANY OF THE ISSUES COVERED BY THIS QUESTIONNAIRE WITH YOUR RESPONSE.

THANK YOU FOR YOUR TIME

Number and Structure of Respondents

EASTERN EUROPE							
Country	No. of respondents	Government Department	National Standards Body	Industry Association	Certification Body	Accreditation Body	Company
Bulgaria							
Czech Rep.							
Estonia							
Hungary							
Latvia							
Lithuania							
Poland							
Romania	3	2	1				
Russia	1				1		
Slovenia							
Turkey	2	1	1				
Ukraine							
Total	6	3	2	0	1	0	0
no. countries	12						
resp. cties	3						
AFRICA							
Country	No. of respondents	Government Department	National Standards Body	Industry Association	Certification Body	Accreditation Bpdy	Company
Algeria							
Egypt							
Ghana	4	2	1	1			
Kenya	1			1			
Malawi	1	1					
Mauritius	4	2	1	1			
Morocco	1		1				
Nigeria	1		1				
Sierra Leone							
Tanzania	1		1				
Tunisia	1			1			
Uganda	no quest.						
Zambia	1		1				
Zimbabwe	1		1				
Total	16	5	7	4	0	0	0
no. countries	14						
resp. cties	10						

Annex 2

ASIA							
Country	No. of respondents	Government Department	National Standards Body	Industry Association	Certification Body	Accreditation Body	Company
China	2		1			1	
HongKong							
India	6	1	1	2	1		1
Indonesia	2	1		1			
Malaysia	1					1	
Oman							
Pakistan	6	3	2	1			
Philippines	4		1	1	1		1
South Korea							
Sri Lanka	1		1				
Taiwan	1					1	
Thailand	2		1	1			
UAEA	2	1	1				
Vietnam	1		1				
Total	28	6	9	6	3	2	2
no. countries	14						
resp. cties	11						
LAC							
country	No. of respondents	Government Department	National Standards Body	Industry Association	Certification Body	Accreditation Body	Company
Antigua	1		1				
Argentina	2				1		1
Barbados	1		1				
Bolivia	3	1	1	1			
Brazil	3				1	1	1
Chile	4		1	1	2		
Colombia	2		1				1
Dominica							
Mexico							
Trinidad							
Total	16	1	5	4	3	2	1
no. countries	10						
resp. cties	7						
	No. of respondents	Government Department	National Standards Body	Industry Association	Certification Body	Accreditation Body	Company
total resp.	66	15	23	14	7	4	3
total no. ctry	50						
total resp.ctr.	31						

Infrastructure for certification of ISO 9000

Country	iso member	ISO 9000					
		acc. to survey		Nat. Accr. Body		Cert. Body	
		according to ISO list	acc. to survey	ISO list	survey	nat/internat.	remarks
AFRICA							
Ghana	full	0		0			
Kenya	?	0		SGS		int	
Malawi	correspondent	0		0	say yes	nat	
Mauritius	full	0		0	say SGS	int	
					say MBS	nat	seeks accr. from Holland
Morocco	full	0	say pending	0	pending	nat	
				AFAQ		int	
Nigeria	full	0	say yes	0	say Standards Org.	nat	
Tanzania	full	0		TBS	TBS say no!	nat	ISO member
Tunisia	full	0	say yes	INNORPI		nat	ISO member
				AFAQ		int	
Zambia	not	0		0			
Zimbabwe	full	0		SAZ		nat	ISO, say they are not accredited
					say: SGS, DNV.	int	
LAC							
Antigua	subscriber	0		0			
Argentina	full		say yes	IRAM		nat	ISO, bilat. agreements
				BVQI, DNV, SGS		int	
Barbados	correspondent	0		0			
Bolivia	subscriber	pending		SGS,		int	
				pending			
Brazil	full	INMETRO	IAF member	ABS		int	
				FCAV, INMETRO..		nat	mutual recognition agreements
				SGS, BVQI..		int	
Chile	full	pending:INN		SGS, BVQI		int	
					say CESMEC	nat	
Colombia	full	Superintendencia		ICONTEC		nat	ISO member

Country	iso member acc. to survey	ISO 9000					
		Nat. Accr. Body		Cert. Body			
		according to ISO list	acc. to survey	ISO list	survey	nat/internat.	remarks
ASIA							
China	full	CNACR	IAF member	BCC, QAC, ...		nat	bilat. agreements
				BVQI, SGS, ...		int	
India	subscriber		say yes	BIS, IRS, STQC		nat	BIS=ISO member
				BVQI, DNV, SGS		int	
Indonesia	full	KAN	ISO member	B4T-QSC		nat	
				SGS		int	
Malaysia	?		say yes	SIRIM		nat	ISO, bilat. Agreements
				BVQI, SGS		int	
Pakistan	?		0	SGS		int	
Philippines	full		say yes	BPS		nat	ISO, bilat. Agreements
				SGS		int	
Sri Lanka	full		0		say Standard Org	nat	not accredited
Taiwan	not		0		say BCIQ	nat	
					say Lloyd's, BVQI	int	
Thailand	full		0	TISI		nat	ISO member
				BVQI, SGS		int	
UAEA	?		0		BVQI, SGS, DNV, ...	int	
Vietnam	full		say STAMEQ		0		
E. EUROPE							
Romania	full	pending, IRS		IRS		nat	ISO member
				SGS, TÜV		int	
Russia	full	GOST R	ISO, IAF	VNIIS, TEST, ...		nat	
Turkey	full		say KAMK	TSE		nat	ISO, bilat agreements
				BVQI, SGS		int	

Infrastructure envisaged by respondents for ISO 14000 certification

Will country have:	Nat. Accreditation Body	Certification Bodies
AFRICA		
Ghana	yes	?
Kenya	yes	should
Malawi	yes	should
Mauritius	?	?
Morocco	no	no
Nigeria	no	yes
Tanzania	yes	should
Tunisia	yes	should
Zambia	?	?
Zimbabwe	?	?
LAC		
Antigua	?	?
Argentina	yes	yes
Barbados	no	should
Bolivia	yes	should
Brazil	yes	?
Chile	yes	no
Colombia	no	no
ASIA		
China	yes	should
India	yes	yes
Indonesia	yes	?
Malaysia	?	?
Pakistan	yes	should
Philippines	?	?
Sri Lanka	no	no
Taiwan	no	should
Thailand	yes	yes
UAEA	?	should
Vietnam	no	should
E.EUROPE		
Romania	yes	should
Russia	?	?
Turkey	yes	should