



Management systems and government



ISO 14001 on public sector agenda at all levels around the world



by **Dr. Alexander Moutchnik**

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ISO 14001 implementation is now growing fastest in the public sector. National and local governments, municipal authorities, city administrations, regional bodies including the European Commission, Olympic committees and even the military sector are implementing ISO 14001. This detailed survey is the first to reveal the amplitude of this global phenomenon.

Not only do environmental management systems (EMS) – principally based on ISO 14001 – play an important role in multinational corporations and small to medium-sized enterprises, today their adoption is now growing fastest in public sector administrations and municipal authorities – and even in the armed forces and defence ministries.

In fact, ISO 14001 is increasingly present on public sector agendas at local, national and regional levels worldwide.

While *The ISO Survey* cautions that its annual breakdowns of ISO 14001 certifications by sector of activity are only to be taken as an indicator – because not all the survey data sources supply such break-

downs – the figures that are available point to a growth in ISO 14001 certification among public administrations. In fact, the rate of growth in the public sector outstrips key industrial sectors.

On the agenda

ISO 14001, the most widely implemented EMS standard, is now firmly within the political arena. In fact, thanks to ISO 14001, both government authorities and business corporations speak the same environmental management language and strive towards the goal of environmental responsibility.

ISO 14001 implementation is cited in national parliamenta-

ry debate and the mass media as sound evidence of an active and successful environmental policy.

Public awareness of ISO 14001 is increasing through political channels – and this is leading to greater acceptance and recognition of EMS implementation, whether in the public or private sector.

As a result, ISO 14001 is treated now not only as an issue of national and international business, but also as an issue of national and international politics. The active involvement of political institutions and organizations in the implementation and certification of their EMS broadens the scale of social environmental responsibility and opens new possibilities

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for reaching societal consensus on targets and measures of common environmental policy. Such unexpected “politicization” of ISO 14001 certification is enhancing its image as a worthwhile endeavour for organizations of all kinds.

Local authorities

The Aalborg Charter of European Cities and Towns Towards Sustainability¹⁾, signed by the representatives of European municipalities in 1994, makes the following declaration:

... The city or town is both the largest unit capable of initially addressing the many urban architectural, social, economic, political, natural resource and environmental imbalances damaging our modern world and the smallest scale at which problems can be meaningfully resolved in an integrated, holistic and sustainable fashion... Therefore, cities and towns are key players in the process of changing lifestyles, production, consumption and spatial patterns.

This and similar initiatives

ISO 14001 is on political agendas worldwide

have spurred numerous local authority EMS development projects in the past decade, including those for collecting and processing environmental data, environmental planning, regulatory, economic, and communication instruments such as directives, taxes, and fees, and mechanisms for increasing public awareness and par-



Aalborg Town Hall, Denmark, seat of the Aalborg Charter of European Cities and Towns Towards Sustainability, and heart of the town's ISO 14001-certified environmental management system.



Size is no factor in ISO 14001 implementation. Whether it's the 6 000-strong German village of Uhlidingen-Mühlhofen on Lake Constance, or Hanover with a population of more than 500 000 – represented by their local government buildings seen here – both operate an EMS in accordance with ISO 14001. (Photos: Hans-Ulrich Hülsbusch).



ticipation.

New environmental budgeting systems have been established and various programmes for environmental protection undertaken. These measures, together with EMS implementation by local authorities, have achieved good results in, for example, the measurement of environmental performance and reduction of operating costs.

Usually, a municipality begins by implementing an EMS in one or two departments such as transportation, procurement or information technology services. Once successfully undertaken, the system can be rolled out to other groups by using similar documents and training materials.

The concept of “ring fencing” an EMS within a group of departments has gained acceptance recently, particularly where the total organization, such as a city municipality, is so large that trying to design and implement a system for the whole entity would be too cumbersome.

A matter of scale

The scale of the EMS being implemented by local authorities depends on the level of responsibility they are willing to accept. The smallest scale is the environmental management of a municipality's buildings – for example, the promotion of *eco-offices* with measures for reduction of energy, water use, and solid wastes, increased recycling, green pro-

1) www.aalborgplus10.dk

curement and appropriate control of chemicals.

Medium scale would be an EMS within all the municipal departments – for example, promotion of *eco-projects* using environmentally friendly and recycled materials and equipment, green public engineering works, and development of green technology.

The largest scale is the application of the EMS at city or town level – for example, *green city planning*, including the setting of “green” guidelines for public works and housing, enhancing public transportation, and capacity building²⁾.

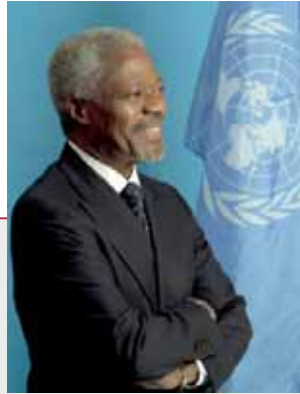
The Council of European

Thanks to ISO 14001, both government authorities and business corporations speak the same language

Municipalities and Regions, Eurocities, the Healthy Cities Network of the World Health Organization, the International Council for Local Environmental Initiatives, the United Towns Organisation (UTO), and the Expert Group on the Urban Environment of the European Commission all sup-

2) Steve Halls (UNEP): “Developing a Framework for a City-level EMS: Implications for Climate Protection”, presentation at the IGES/APN Mega City Project Workshop, 23-24 January, 2002, Kitakyushu, Japan. www.iges.or.jp/en/ue/pdf/megacity02

3) The Hanover Call of European Municipal Leaders at the Turn of the 21st Century; “The Third European Conference on Sustainable Towns and Cities”, Hanover, Germany, 9-12 February, 2000.



UN Secretary-General Kofi Annan has paid tribute to ISO's 'important contribution towards a more sustainable world'.

High-level political recognition

ISO's contribution to helping to meet global environmental challenges has been highlighted by United Nations Secretary-General Kofi Annan.

He declared: “ISO makes a unique contribution in a range of vital areas – health, safety, security, the environment, transport and information technology. ISO standards are crucial to sustainable development...”

“Let me also commend ISO for broadening the scope of its work in the area of social and environmental performance. In this way, too, you are making an important contribution towards a more sustainable world.”

These comments were included in his message to the ISO 27th General Assembly, 14-16 September 2004, in Geneva, Switzerland, delivered on his behalf by Mr. Sergei Ordzhonikidze, Director-General, United Nations Office at Geneva.

See “Kofi Annan's message”, *ISO Management Systems* November-December 2004.

port local governments in their efforts to implement a standardized EMS.

A total of 650 local and regional authorities from 32 countries across Europe, representing more than 130 million European citizens, have committed themselves to local sustainability by signing the Aalborg Charter³⁾.

Size no factor

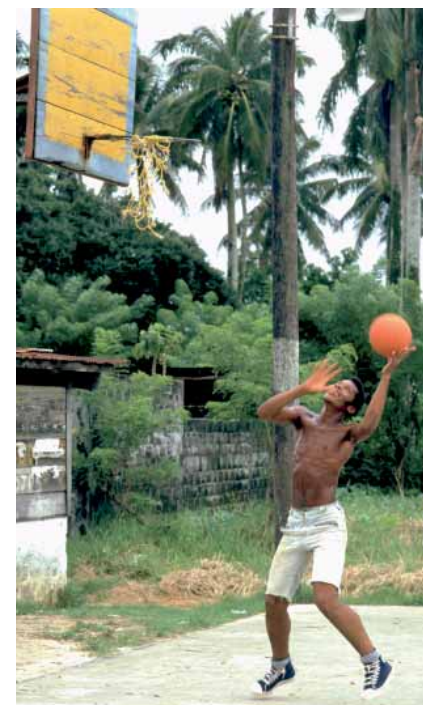
Many cities, towns, and regions worldwide have already implemented an ISO 14001-based EMS. Good examples are Sydney, Australia⁴⁾; Aalborg in Denmark⁵⁾; Toronto⁶⁾ and Calgary in Canada – the first municipality in North Ameri-



The World Health Organization's (WHO) European Healthy Cities Network, now numbering 50 cities, supports local government efforts in EMS implementation. WHO's definition of a healthy city is one that is continually creating and improving the physical and social environments for its community. (Photos: WHO).

ca to achieve corporation-wide ISO 14001 certification⁷⁾; Langfang in Hebei Province – the first, and I believe only, ISO 14001-certified city in China⁸⁾; Jesolo⁹⁾ and Varese Ligure¹⁰⁾ in Italy (see also pages **xx-xx**, “Italy goes for gold in public administration”).

And size is no obstacle to



Many cities, towns, and regions have already implemented an ISO 14001-based EMS

4) www.cityofsydney.nsw.gov.au/Environment/Overview/EnvironmentalManagementSystem.asp

5) www.aalborg.dk/Borgerportal/default.htm

6) www.toronto.ca/fleet/ems_iso.htm

7) www.calgary.ca

8) www.isse.ucar.edu/china/city_pilot.html

www.lf.gov.cn/pub/hm/newscenter/meitiguanzhu/2005-12-19-3132.htm

9) www.jesolo.it

10) www.comune.scansano.gr.it/s_emas.htm

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implementing an EMS. In Germany, whether it is the 8 000-strong village of Uhldingen-Mühlhofen on Lake Constance, Kehl with 30 000 inhabitants, Augsburg with 260 000, or Hanover with a population of more than 500 000¹¹⁾ – all operate an EMS in accordance with EMAS II. EMAS is the European Union's Eco-Management and Audit Scheme and its second version includes the requirements of ISO 14001.

A government entity with ISO 14001 can act as a mentor to local industries

11) www.qumsult.de/umweltmanagement%20fuer%20kommunen%20und%20verwaltungen.htm

12) www.getf.org/projects/muni.cfm

13) Jørgen Lund Madsen (2005): "Improving Copenhagen's green procurement with EMAS", presentation at the European Conference on Eco-Management in the new Member States and Local Authorities – Cases and Visions", Villach, Austria, 4-5 October, 2005. www.emasconference2005.at

14) Hari Srinivas, Makiko Yashiro: "Cities, Environmental Management Systems and ISO 14001: A View from Japan", International Symposium on Sustainable City Development 1999, Seoul, South Korea; see also Mark Bekkering, David McCallum: "ISO 14001: A Tool for Municipal Government to achieve Sustainability", published in *Greener Management International* 28, 1999, pp. 103-111; Kazuhiko Mizuno (2002): "Leading by example: local government in Japan adopts ISO 14000 and ISO 9000, funds SME implementation", published in *ISO Management Systems*, Vol.2, No 3, May-June 2002, pp. 21-28.



The new Government of Canada building in Vancouver has been recognized for its special accomplishments in sustainable development and design. Grass growing on rooftops, solar panels covering walls, natural ventilation, recycled building materials and rainwater are just some of the environmentally friendly features seen on and in new government buildings.

In January 2000, the US Environmental Protection Agency, together with the Global Environment and Technology Foundation, issued "The Environmental Management System Pilot Program for Local Government Entities"¹²⁾.

Nine government entities so far have participated in this pilot project and successfully implemented an EMS. They range from the 15-person Londonderry, New Hampshire, Department of Public Works to the 1 700 Capital Programs

Management staff within the New York City Transit Authority.

Proud to display

Many city municipalities and regional authorities proudly display their ISO 14001 certificate in order to send a message to tourists, investors, and citizens proclaiming their commitment to good environmental management. For example, the Municipality of Copenhagen, Denmark, has a goal

of making the city "Europe's environment capital".

It uses "green audits" to map consumption of electricity, water and heat in council-owned properties as one of the ways to sustainable development. These audits are also used as instruments in the political debate about all sorts of environmental factors, from council acquisitions, bicycles for employees, to major building investments.

Copenhagen is also introducing environmental management in line with the European Union's Eco-Management and Audit Scheme (EMAS)¹³⁾.

A government entity with an ISO 14001- or EMAS-certified EMS can also act as a leader or mentor to local industries. Several Japanese cities have already started EMS implementation to increase efficiency in the delivery of day-to-day services, and encourage citizens to assume more environmental responsibility.



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The Tokyo Metropolitan Government, Itabashi Ward of Tokyo, Shiroy City and Gifu Prefecture, have all obtained ISO 14001 certification, or are in process of doing so. Cities that are already ISO 14001-certified report increased ISO 14001 certification by businesses in the region¹⁴.

European Commission

In January 2006, the European Commission adopted "The Thematic Strategy on the Urban Environment" to coordinate the exchange of environmentally oriented experience among regional and local authorities, with a long-term goal of improving the environment in Europe's cities. One of the proposed measures is integrated EMS implementation in cities of over 500 000 population¹⁵.

ISO 14001 or EMAS certifications are probably the most appropriate and internationally recognizable means to demonstrate successful EMS implementation. However, an ISO 14001 certificate provides evidence of the existence of an EMS only, and not of the current environmental situation in a region.

This is because it is possible for two similar organizations with different environmental performance to conform to ISO 14001 requirements¹⁶. That suggests that even successful EMS implementation might not necessarily trigger an immediate improvement in a city's environment.

Nearly 200 US federal facilities have an EMS in place modelled on ISO 14001

On the contrary, the experience of EMAS-certified municipalities in the United Kingdom illustrates the complexity of environmental management at the municipal level – such as the difficulty of setting measurable objectives and of seeing any measurable environmental benefits in the short term, and the need to modify municipal communications policy because of the EMAS requirement to report environmental performance, good or bad, to the public¹⁷.

Winning the race

Nevertheless, in addition to international agreements, there are other forces that drive local authorities to establish an ISO 14001-certified EMS. The Winter and Summer Olympic Games, the Goodwill Games, international exhibitions and fairs, sport championships, and other large international events now require sound environmental management – not only at the event locations such as swimming pools or exhibi-



Thousands of cherry blossom trees bloom in Spring along the banks of the Shakujii River in Tokyo's Itabashi Ward district, a tribute to the city's ISO 14001-certified EMS.

tion halls, but also by the host city municipalities.

There are side-effects from this development. Firstly, the existence of a verifiable EMS is increasingly a condition of participation or to tender for such events. Therefore, they

Sweden's central government is involved in broad-scope EMS implementation in the public sector, covering environmental management of many towns and cities, including the capital city, Stockholm.

15) http://europa.eu.int/comm/environment/urban/thematic_strategy.htm

16) ISO 14001:2004, Introduction

17) http://europa.eu.int/comm/environment/emas/local/index_en.htm



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Pragelato, Italy, was chosen as the site of the ski jumping events of the 2006 Winter Olympics because its geomorphology and profile allowed construction of the jumps with minimal impact on the mountain - seen here in pre-Olympic "dry-run" mode. The Turin Olympics Committee looked for ISO 14001 certification in the selection of many suppliers to the event.



are implemented not only in the winning cities, but also in the losing candidate municipalities.

Secondly, the organizing committees in the chosen cities, e.g. the 2006 Winter Olympics Committee in Turin (TOROC - see also pages xx-xx, "Italy goes for gold in public administration"), may decide to select suppliers primarily with ISO 14001 certification. These are further reasons for the spread of ISO 14001¹⁸⁾.

Central government

Governmental organizations significantly impact the local environment because of their size, geographic distribution, activities, and expenditures.

They also play a decisive role in developing, establishing and disseminating environmental management standards.

In many countries, the national standardization bodies are part of the central government framework. Representatives of these bodies take part in regular ISO technical committee meetings and work on translating, editing, and promoting International Standards.

In an increasing number of countries, governmental organizations conduct environmental audits and provide training and accreditation of environmental auditors. EMS certification has become a formal requirement for companies wishing to tender for large state contracts.

National governments therefore contribute significantly to the growth of EMS implementation in the public and private sector.

An EMS is increasingly a condition to tender for major sporting events

To increase the impact of governmental pro-environment policies and programmes, ministries and other governmental bodies may themselves seek ISO 14001 certification. In addition to the benefits that these bring to their own operations, this enables them to demonstrate to stakeholders that they practise what they preach.

Japan provides examples: on 3 April 2006, the Ministry of Agriculture, Forestry and Fisheries became certified, following the ISO 14001 lead set several years ago by the Ministry of the Environment.

EMS and the USA

In 1996, the US Congress adopted the National Technology Transfer and Advancement Act requiring federal agencies to adopt International Standards where they exist, instead of creating their own.

In 2000, the North American Working Group on Environmental Enforcement and Compliance Cooperation (EWG) released final revisions of a draft report addressing EMS compliance management elements.

The EWG position was that governments must retain the primary role in establishing environmental standards and enforcing compliance with laws and regulations. While the EWG recognized the primacy of government, it also stressed that implementation of a comprehensive EMS

18) http://www.torino2006.org/ENG/OlympicGames/spirito_olimpico/hector.html

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should improve an organization's overall environmental performance¹⁹.

EMS implementation in federal agencies and departments was incorporated in Presidential Executive Order 13148 in 2000, as part of the Clinton Administration's efforts to ensure that agencies improve their performance through more effective management²⁰.

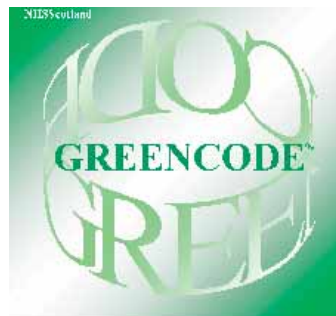
The order required all major federal facilities to develop and implement an EMS by December 2005. Although it did not specify ISO 14001, the International Standard was, nevertheless, the most readily recognizable model and the one that included all the essential elements.



Michael Ahern, (left) Minister for Trade and Commerce of Ireland, presenting ISO 14001 certification to Cork City Councillor Colm Burke, for environmental management of the Cork City Council's Landfill Civic Amenity site.

To date, nearly 200 US federal facilities have an EMS in place modelled on ISO 14001, 20 have had their systems third-party certified, and many more are developing agency policies, training, and EMS implementation tools.

Furthermore, the Environmental Protection Agency



Designed by the United Kingdom National Health Service (NHS), Greencode is an innovative computer-based environmental management tool extensively used in the health care, retail and manufacturing sectors throughout the United Kingdom to implement EMS and achieve ISO 14001 certification.

and the National Aeronautics and Space Administration are developing resources that other agencies can use in implementing an EMS.

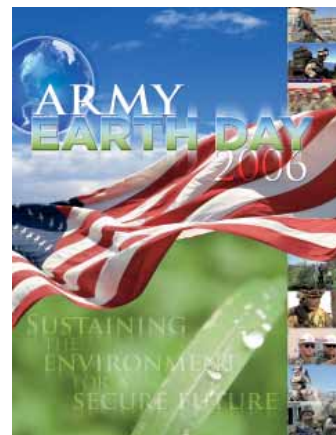
In 2002, the White House Office of Management and Budget also revised its budget guidelines to include provisions for EMS implementation²¹.

EMS and the United Kingdom

A "greening" of government operations strategy has also received a great deal of attention in the United Kingdom, where ISO 14001-based EMS implementation plays an important part in sustainable development and within national environmental programmes²².

The United Kingdom Department of Environment, Transport, and the Regions has developed a model policy statement for government depart-

ments to help them develop their own strategies for greening operations. This lists EMS implementation or extending an existing EMS, and achieving ISO 14001 certification, under the suggested aims of the department.



As part of its environmental activities, the US Army celebrates Earth Day on 22 April each year at some 200 major commands, installations and organizations in the USA, Alaska, Hawaii, Korea, Japan, Italy and Germany.

Also, the National Health Service in Scotland has developed a computerized ISO 14001-based EMS called *Greencode*²³ – designed to enable organizations to implement coherent, structured management systems and achieve ISO 14001 certification swiftly and cost effectively.

The intention is to provide a common approach to the use of resources and the control of environmental impacts across hospitals and facilities in Scotland.

The United Kingdom Government has also suggested that all its departments should begin broad EMS implementation. Several currently have

sites certified to ISO 14001, and many more are in the process of implementing an EMS²⁴.

Central government agencies in Japan and Sweden are also involved in broad-scope EMS implementation covering direct and indirect effects arising from policies, decisions, and ordinances²².

Military sector

Defence ministries are now implementing environmental management systems in a similar manner to other governmental bodies – and this is perhaps the most remarkable and important development in the politicization of such systems.

By definition, the military sector includes the armed forces and defence administrations responsible for supporting military activities, and deploys a wide variety of ordnance in the form of weapons, aircraft, ships, armoured and other vehicles, in addition to real estate.

19) www.ccc.org/ewg

20) <http://ceq.eh.doe.gov/nepa/regs/eos/eo13148.html>

21) James L. Connaughton (2002): "The United States Federal Government and Its Uptake of the ISO 14000 Series of Environmental Management Standards", White House Council on Environmental Quality, Washington D.C.; www.ofee.gov/ems/training/The_US_Government_and_the_ISO_14001_Series_of_Standards.doc

22) www.denix.osd.mil/denix/Public/Library/EMS/Documents/finalreport6.html

23) www.show.scot.nhs.uk/pef/guest/energy/greencode.htm

24) www.sustainable-development.gov.uk/publications/report1999/07.htm

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The Pilot Study on Environmental Management Systems in the Military Sector, conducted by the NATO Committee on the Challenges of Modern Society, stated that the sector's environmental impact often outweighed that of most other government departments.

ISO 14001 is now being adopted worldwide by virtually all types of organization

Given this, it recommended that ministries of defence and armed forces should implement an EMS and concluded that such a system was the best way to protect the environment and maintain operational readiness²⁵⁾.

"Defence has an obligation to minimise the environmental damage caused by peacetime military activities," said Major General E. N. Westershuis, Coordinator of Physical Planning and Environmental Affairs of the Dutch Ministry of Defence, in his opening speech on 7 May, 1996, introducing the Pilot Study. "The environment should concern everybody including managers and individual soldiers. The responsibility must lie where the environmental impact is caused, for example, with the individual soldier or unit commander."²⁵⁾

The study underlined that the role of the environment in the military sector was complex, particularly since defence organizations are increasingly

bound by national and international regulations to protect the natural resources of defence ministry-controlled land, and to act in an environmentally responsible manner.

It concluded that EMS implementation in the military sector was both possible and desirable, and that ISO 14001 should be used as a framework for further work in Belarus, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, Georgia, Germany, Hungary, Italy, Latvia, Lithuania, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, the former Yugoslav Republic of Macedonia, the United Kingdom, and the USA.

NATO guidelines

The NATO Committee has developed guidelines for ISO 14001 implementation in the NATO military forces. It also requires ISO 14001 certification of its suppliers. These decisions were based on the recognition that:

- ISO 14001 is the most recent EMS standard and the only one recognized worldwide;
- ISO 14001 can be integrated easily with the ISO 9001 quality management standard already used by NATO forces;
- ISO 14001 has already been adopted by several NATO and Partnership for Peace countries;
- ISO 14001 is arguably the most easily implemented EMS standard;

- ISO 14001 is user friendly when implemented in line with the ISO 14004 guidance document²⁵⁾.

The Office of the Secretary of Defense of the United States has also recognized the potential of ISO 14001 in helping to improve the department's mature environmental programme. After holding a symposium with industry and key department officials, the Department of Defense agreed to implement ISO 14001 at its installations to determine the benefits²⁶⁾.

In line with guidance issued under the United Kingdom's Greening Government initiatives, and with the Secretary of State for Defence policy statement published in 2000, the United Kingdom Ministry of Defence (MOD) is reportedly developing a framework for a MOD-wide EMS based on ISO 14001²⁷⁾.

Any EMS standardization across the NATO countries framework would enhance the integration of sustainable development into military activities. The initiatives of the ministries of defence are important not only from a civilian perspective, but also because military manufacturing companies are now achieving ISO 14001 implementation and certification.

Previously, environmental audits of military contractors had not been undertaken mainly because military production enjoys protected state secret status, and the independent third party nature of such audits requires special permission.

In addition, some independent auditing firms and sustainability ranking agencies – like the SAM Group in Zurich which has launched the Dow Jones Sustainability Indexes – exclude enterprises involved in armaments, firearms, tobacco, alcohol and gambling from their sustainability ranking lists because of ethical considerations²⁸⁾.

Due to the politicization of environmental management standards, the EMS situation in the military sector will change radically in the next few years because state sanctioned or supported defence producers are expected to pursue EMS implementation and ISO 14001 certification.

Outlook: speaking the same language

I see three key driving forces behind the current politicization of environmental management system standards:

1. Local authorities, governmental bodies and military organizations are now actively involved in EMS implementation;
2. Political institutions are pressuring private corpo-

25) NATO (2002): "Pilot Study on Environmental Management Systems in the Military Sector", NATO-CCMS, Report No. 240 www.nato.int/ccms/publi/envmil/envmil2.pdf

26) www.defenselink.mil/execsec/adr1999/chap16.html

27) www.mod.uk/DefenceInternet/AboutDefence/Organisation/Agencies/Organisations/AllenbyConnaught/EnvironmentAndSustainability.htm

28) www.sam-group.com/html/djsi/indexes.cfm

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rations to implement ISO 14001 or EMAS as a condition of the right to tender for state contracts;

3. ISO 14001 now features widely in political debate.

Many organizations decide to implement an ISO 14001-based EMS because it offers a balanced approach to managing the environmental impacts of production and service activities.

However, real environmental performance improvements are achieved not only through EMS implementation itself but through investments and activities managed by the system. That is why it is difficult to differentiate EMS benefits from those of other environmentally oriented measures. The benefits of ISO 14001 implementation can also be hard to measure.

Nevertheless, certification is a powerful marketing and communication tool – a means

by which an organization can demonstrate to regulators, the public, customers, industry, and other interested parties that it is committed to sustainable development and operates a sound environmental policy.

ISO 14001 now features widely in political debate

EMS politicization, shown by the growing number of ISO 14001-certified municipalities and local authorities, has created new conditions for the business world too.

Firstly, certified private sector organizations *and* local authorities can now speak the same language based on ISO 14001. The hope is that local companies will enjoy greater understanding and support for their environmental activities from the state authorities, and provide stable social and economic

development. Public and private sector implementation can also prevent the “flight” of industry from countries with strong environmental regulations and low pollution limits to countries with little, if any environmental legislation.

Secondly, SME’s can now achieve real benefits from EMS implementation and from ISO 14001 certification, even though they may not trade internationally or belong to a multinational corporation.

Thirdly, thanks to EMS politicization, environmental standardization has moved beyond the business sector, and ISO 14001 is now being adopted worldwide by virtually all types of organization – whether armed forces or abattoirs, bakeries or breweries, governments or garages, hospitals or hotels, municipalities or munitions factories, prisons or paper mills – and whether public or private, corporation or city.

Finally, cooperation between businesses, local authorities and the public in managing the environmental impact of their activities can lead to collaborative networks – and these can help local governments in their endeavours to achieve continual environmental improvement.

Unique phenomenon

Among the most surprising outcomes of EMS politicization is the fact that many organizations operating under state secrecy, such as those in the military sector, are now undergoing third party audit en route to ISO 14001 certification.

Clearly, ISO 14001-based EMS implementation can now be considered appropriate for any organization. As a result, the number of certified entities can be expected to increase rapidly over the next few years.

Indeed, the united efforts of the business world, governmental organizations and the community to manage environmental performance via EMS implementation is a unique social, political and economic phenomenon – and one that inspires hope for the sustainable protection of the local and global environment. •



Cleaning up and replanting at the Spanish Navy's El Retin training camp in Cadiz, southern Spain, which is believed to have been the first armed forces manoeuvres camp in Europe to achieve ISO 14001 certification of its EMS.