Environmental Management Systems and Environmental Policy Measures

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Abstract: An externally validated and properly implemented EMS is believed to be an effective policy tool to secure positive environmental outcomes. This paper will, firstly, describe how EMS can work as a policy instrument, secondly, introduce some examples of new EMS standards that give special focus on small and medium sized businesses, thirdly, outline current policy measures aiming to enhance implementation of EMS by organizations, and lastly, point out few issues required to be further explored. It is a welcoming trend to substantiate policy measures and standards in order to promote implementation of EMS among wide range of businesses. However, we ought to be cautious in using regulatory relief as one of the measures to promote EMS. It is necessary to carry out a comprehensive and empirical research in order to demonstrate whether EMS actually brings legal compliance as well as better environmental performance.

1. Introduction
Since the issuance of an international standard of environmental management system, ISO 14001, in 1996, Japan always has been in the lead in the number of sites or organizations that are certified to this standard. As of April 2005, Japan reached 18,104 (about 20%) in the number of ISO 14001 certification out of 88,800 worldwide. China came in the second place with 8,365 certifications and followed by Spain with 6,523, UK 6,323, Italy 5,304, US 4,671, Germany 4,440, Sweden 3,716, Korea 2,610, and France 2,607.

An externally validated and properly implemented EMS is believed to be an effective policy tool to secure positive environmental outcomes. It should enable sites or organizations to comply with environmental legislation as well as to continually improve environmental performance. Based upon these expectations on a role of EMS in improving environmental policy outcomes, Japanese authorities at both local and national levels are introducing several different measures to enhance EMS implementation by organizations. Also, there are some new EMS standards that are tailored for small and medium sized enterprises (SMEs).

This paper will, firstly, describe how EMS can work as a policy instrument, secondly, introduce some examples of new EMS standards that give special focus on SMEs, thirdly, outline current policy measures aiming to enhance implementation of EMS by organizations, and lastly, point out few issues required to be further explored.

2. A Role of EMS as an Environmental Policy Instrument
The second Basic Environment Plan of Japan published in December 2000 has categorized environmental policy instruments into the following six:
(1) direct regulatory instruments (command-and-control),
(2) framework regulatory instruments, such as PRTR (Pollutant Release and Transfer Registry System) and control of hazardous pollutants through setting comprehensive emission levels required to be met at a site boundary;
(3) economic instruments, such as levies, taxes, subsidies, deposit & refund system, and emissions
trading,
(4) voluntary action instruments, such as use of voluntary agreements or covenants, promotion of voluntary actions of target industries through programmes,
(5) information instruments, such as eco-labels, information provided through PRTR system or environmental impact assessment (EIA) system,
(6) procedural instruments, such as EIA, SEA (strategic environmental assessment).

EMS can be given characteristics of several of above mentioned instruments. For example, if an industry agrees by signing a voluntary agreement with a local authority to voluntarily implement ISO14001 and to make environmental reports available to the public, then EMS can be categorized as a voluntary action instrument. If an authority introduces a legal procedure which requires participating organizations to implement EMS and to report its environmental performance, then this becomes a procedural instrument. Also the reporting part can function as information instrument as well as economic instrument using market forces. Moreover, EMS and other systems concerning EIA and the free access to information can work complementarily with one another. Also, PRTR can be integrated into EMS. These examples demonstrate that EMS can be given multifarious characteristics of policy instruments that can complement traditional command-and-control approach in realizing more effective environmental policy outcomes. 1

3. New EMS Standards tailored for SMEs
SMEs constitute 99.7% of about 4.7 million private companies in Japan. However, those who are certified to ISO14001 are mainly large enterprises, and many of SMEs are facing difficulties in terms of time, money, human resources and know-how in implementing ISO14001 2. The following are examples of new EMS standards that have been developed to enhance more participation of SMEs.

(1) Eco-action 21 developed by the Ministry of Environment
Eco-action 21 (EA21) was launched in 1996 by the former Environment Agency (now the Ministry). EA21 especially focuses on SMEs and allows their voluntary participation. It originally started as a registration system of SMEs who declared to have met all the requirements in the EA21 Guideline3. Since the fiscal year of 2004, EA21 has incorporated external validation by accredited EA21 verifiers.

EA21 uses ISO14001 as its basis but in more simplified manner, and at the same time taking EMAS (Eco-management Audit Scheme) of EU as an example, it also requires external validation and preparation and publication of environmental action reports.

(2) EMS Standard developed by Tottori Prefecture4
Tottori Prefecture has developed EMS standard with three phases. Participating organizations can gain official recognition for their achievements at each phase from III to I. Not only SMEs but also households, schools and communities can participate. Phase I is the highest level that an organization can reach, and its certification is only valid for two terms that is six years at the longest.


After this period, certified organizations are required to move toward ISO 14001 certification. For those organizations certified to Phase 1, more opportunities to participate in bidding of public procurement are provided and also higher points are given in ranking of companies in the construction industry by the prefecture. Validation and certification for lower two phases are done by the prefecture and for the top phase is carried out by the prefecture and the council of environmental promotion at free of charge.

4. Measures to Promote EMS Implementation

Information provision through pamphlets and seminars and financial supports are the most commonly used measures to promote EMS (usually ISO 14001) in Japan. Like Tottori Prefecture, we can also think of giving some advantages to organizations with a certified EMS in the public procurement (so called green procurement) procedure. Using environmental agreements is another way to persuade organizations to acquire EMS certification.

In more recent years, the use of regulatory relief to enhance EMS certification started to emerge. Kanagawa Prefecture is perhaps the first authority in Japan to introduce such a regulatory relief to specific sites certified to ISO 14001 under the Prefectural Ordinance on Protection of Life and Environment which came into force in April 1998. The intention of the prefecture was to streamline administrative procedure in pollution control, to promote voluntary environmental action among industrial sites, and to make such voluntary actions more transparent. The prefecture decided to place ISO 14001 as an objective indicator to judge self-management ability of industrial sites. Sites with ISO 14001 can be exempted from acquisition of license prior to facility alterations and submission of environmental documents.

5. Conclusion

In addition to those measures to enhance ISO 14001 certification by sites and organizations, new EMS standards tailored for SMEs are being developed. It is a welcoming trend to substantiate policy measures and standards in order to promote implementation of EMS among wide range of businesses. However, in my opinion, we have to be cautious when using regulatory relief as one of the measures to promote EMS.

It has long been assumed that there is a link between environmental performance as well as regulatory performance of a site or an organization and the presence of a certified EMS. However, there is still a lack of evidence at present to support this assumption. Before introducing any mechanism to provide regulatory relief to a particular site, any competent authority has to be convinced that operating within the constraints of an externally certified EMS will result in greater compliance with regulatory requirements.

Therefore, there is a necessity to carry out a comprehensive and empirical research in order to demonstrate:

- whether EMS improves performance and compliance with environmental regulation,
- how effective implementation of EMS may improve environmental performance faster and/or further than command-and-control regulation.

In the UK and other European countries, using a funding from the EU, a three year project called ‘REMAS’ project has been carried out since 2002 to assess the effectiveness of EMSs. The interim findings of the project so far are:

- EMS operations (performance monitoring, environmental reporting, and compliance and conformance control) can lead to better resource use in processes and therefore better environmental outcomes.
- EMSs are better implemented where a company has EMAS or ISO 14001.
- Accredited certification provides a sound basis for achieving higher levels of environmental performance than DIY or in-house systems.

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5 Shigeharu Take, Actions under the Ordinance in Kanagawa Prefecture, Local Finance, August 1998, pp.21-30 (only available in Japanese).

The final report of the REMAS project is awaited to be seen, but it is also necessary for Japan hopefully with other Asian countries to carry out our own comprehensive and empirical research on effectiveness of EMSs – ISO14001, EA21 and other EMS standards – and to further explore how to incorporate EMS into environmental regulation and policy making.